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Part IX

Environmental Protection Agency

Motor Vehicles; Emission Control System Performance Warranty Short Tests and Warranty Regulations; Final Rules

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 85

[FRL 1488-3]

Motor Vehicles; Emission Control System Performance Warranty Short Tests

AGENCY: U.S. Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: This action establishes emission performance warranty "short tests" as provided in Section 207(b) of the Clean Air Act, 42 U.S.C. 7541(b). These short tests and corresponding warranty regulations (proposed April 20, 1979; 44 FR 23784) will be used in conjunction with state and local government vehicle inspection/maintenance (I/M) programs. Under certain circumstances, a vehicle owner will be entitled to repairs at the manufacturer's expense if his vehicle exceeds short test standards. This action promulgates three test procedures; idle, two speed idle and a two mode loaded tests for 1981 and later model year light duty vehicles and light duty trucks. For each test, uniform standards apply to all vehicles: 1.0% CO and 200 ppm HC (hexane) on the two speed idle test, 1.2% CO and 220 ppm HC (hexane) for the idle and two mode loaded procedures. The regulations give the manufacturers the option of requesting alternate standards and procedures if the general provisions are not appropriate because of special designs, unique technology and other similar factors.

EFFECTIVE DATE: These regulations take effect on June 23, 1980.

FOR FURTHER INFORMATION CONTACT: Richard W. Nash, Inspection/Maintenance Staff, 2565 Plymouth Road, Ann Arbor, MI 48105, (313) 668-4412; FTS 374-8412.

SUPPLEMENTARY INFORMATION: On May 25, 1977 a notice of proposed rulemaking to establish emission performance warranty short tests was published, 42 F.R. 26742. In that notice five specific short tests were proposed with various alternate standard setting mechanisms. Under the proposal, standards would have been developed for groups of vehicles, each group having common characteristics. To establish standards, a number of production vehicles would have been tested on the various short tests.

In light of the comments received, and further consideration of the issues by the Agency, the proposed approach to the short test and associated standards has been simplified. The number of short tests under consideration was reduced to three (idle, two speed idle, two mode loaded). Instead of developing short test standards for many different groups of vehicles, a single uniform set of standards appeared to be the best approach. (Standards were developed by analyzing data collected in EPA's Portland Oregon I/M evaluation project.) The comment period was reopened for 30 days by **Federal Register** notice on January 31, 1980, 45 FR 6960. All comments have been reviewed and considered in formulating the final regulations.

These short tests will also be available in non-Inspection/Maintenance areas. Under the dealer certification provisions of the proposed warranty regulations (40 CFR 85.108, 44 FR 23797), the manufacturer would be responsible for repairing any vehicle which fails a short test within three months of its initial sale. This requirement is not dependent upon an I/M program with its "penalties or sanctions"; it may be invoked upon failure of the short test.

Statutory Requirements

Vehicle emission inspections are an effective tool in combating urban air pollution. Several jurisdictions have I/M programs operating, and more will take effect over the next few years. While in many instances failure of an emission inspection is caused by improper maintenance, some failures can be attributed to the vehicle manufacturer. An effective emission performance warranty will remove the financial burden of repairs attributable to the manufacturer (for the warranty period). In addition, this potential remedy should make I/M programs more attractive to states and the general public, thereby encouraging their adoption for areas in which they are needed.

This action is taken under authority of Section 207(b) of the Clean Air Act, 42 U.S.C. 7541(b), which provides in pertinent part:

> If the Administrator determines that:
>
> (i) There are available testing methods and procedures to ascertain whether when in actual use * * * each vehicle * * * complies with (applicable) emission standards * * *
>
> (ii) Such methods and procedures are in accordance with good engineering practices, and
>
> (iii) Such methods and procedures are reasonably capable of being correlated with (certification tests), then * * *
>
> he shall establish such methods and procedures by regulation * * *.

The first criterion requires that testing methods and procedures be available. The second and third criteria establish the parameters that the testing methods and procedures must meet: the tests must be consistent with good engineering practices (section 207(b)(ii)) and must be reasonably capable of being correlated with the tests used in certification (section 207(b)(iii)).

Those three requirements have been satisfied; accordingly, this action establishes the short tests and associated standards. The final emission performance warranty regulations, needed to complete this scheme, will be promulgated in the very near future.

A short test is "available" if equipment exists and can be readily obtained and also if the procedure can be reasonably expected to serve its function: identifying non-complying vehicles. The adopted tests clearly meet this requirement. These, or similar procedures, are currently in use in a number of jurisdictions as inspection tools. Many private repair facilities also have the capability of performing either of the idle tests; and, in fact, it has been common practice for a vehicle manufacturer to specify an idle CO concentration for tune-up purposes or for major carburetor repairs.

The second criterion, which requires that the procedures be in accordance with good engineering practices, is satisfied if the tests can be conducted within the reasonable capability of personnel and equipment. Again, these tests meet the requirements. Test results on almost 6000 vehicles have been analyzed. These results indicated that the short test can accurately identify high emitting vehicles. These tests were performed in a number of locations and, in some cases, included actual I/M lane results. (As suggested in comments to the original NPRM, "real world" experience was deemed to be necessary to validate any short tests and standards.) Over 2200 vehicles were tested at an actual I/M lane with typical equipment and personnel. Short test results obtained were compared with FTP emissions determined by EPA's contractor. Such a long term and extensive evaluation of an operating program is an excellent way to determine if the procedures comply with good engineering practice. Further, a comparison of results obtained on the short tests (using "garage" equipment) with certification test results (using "laboratory" equipment) verified that these procedures are within the capabilities of field equipment.

By far the most difficult aspect of short test development is the

"correlation" requirement. A bit of background may prove useful in explaining this item. Before a new passenger car (light duty vehicle) or light truck may be sold in the United States, it must be tested for emissions and must receive a certificate of conformity from the Environmental Protection Agency. These emission tests are performed on a limited number of prototype vehicles; the test is complex and covers a great many operating modes. When Congress passed Section 207(b), it required that any short test be "reasonably capable of being correlated" with the certification test, known as the Federal Test Procedure (FTP). A possible motive for this requirement was to insure that the manufacturer only be required to certify his vehicle to the existing Federal Test Procedure and not have to face a new set of standards imposed by any short tests that the Agency would adopt. Also, without the correlation requirement, the vehicle manufacturer might be required to make warranty repairs on properly functioning cars and trucks. Trying to match the complicated, lengthy test with a procedure to be used for "production line" or "in-use" inspections, however, is most difficult.

In the NPRM several methods of correlation were proposed. These methods employed standard statistical tools (linear regressions, contingency tables), at that time believed to be feasible methods for determining correlation. In an effort to promote the maximum possible correlation, vehicles were to be classified into groups with many common elements (engines, weight, etc.). Extensive test programs would be run on each group to determine its correlation characteristics and, subsequently, to set short test standards.

Comments received in response to the NPRM pointed out the limitations of the linear regression and contingency table techniques as well as the difficulty in achieving perfect correlation due to the nature of the two tests. The FTP is a "cold start" test while the I/M short tests all begin with a warm, running engine. (During the FTP, a vehicle is kept in a controlled temperature environment. This insures that the cold start is as repeatable as possible. For short tests, vehicles are tested at operating temperature since this also lends itself to repeatable testing.) Since vehicles have high emissions during cold starts, it is impossible for a practical I/M test to detect such emissions. Concerns were also raised about the large amount of testing necessary to establish short test standards for each vehicle group, and about the type of vehicles which would be tested. After careful consideration of the comments and analysis of data from an I/M evaluation program in Portland, Oregon, a simplified approach is being adopted. A uniform set of short test standards will apply to all vehicles, with standards set to detect a substantial portion of emissions in excess of the certification standards.

The agency has chosen a correlation methodology which holds false short test failures, i.e. errors of commission (Ec's), to the same approximate level as if the full FTP had been used as the short test. An Ec occurs if a vehicle which would pass the FTP is failed by the short test. EPA believes that this approach satisfies the requirement of "reasonable correlation"; further, the Agency emphatically rejects the contention that "perfect correlation" (i.e. prediction of numerical FTP results) is required. "Perfect correlation" would mean that the short test would have to accurately predict both FTP passes and failures. Such a requirement certainly cannot be met at this time, if it can be met at all. The FTP is an extremely complicated test which begins with a cold engine; a large portion of the total HC and CO emissions comes from the cold start, which requires at least a 12 hour shut-down. Since no practical short test can ever begin with a cold start, it appears that perfect correlation can never be obtained. EPA believes that Congress could not have intended such an impossible construction, which would in effect prevent the creation of a program which Congress wished to see implemented. None of the commenters who raised objections to EPA's correlation methodology proposed any alternatives that satisfied their objections.

A statute should ordinarily be read to effectuate its purposes rather than to frustrate them. In construing Section 207(b), one should not lightly infer that Congress intended to adopt a requirement that simply cannot be met. Indeed, the fact that Congress chose the language *"reasonably* capable of being correlated" (emphasis added) indicates its intent that the short test be a reasonable predictor of what could be expected if a vehicle were subjected to the certification (FTP) test. Reading Section 207(b) in its entirety suggests that Congress intended only that the short test identify non-conforming vehicles with reasonable accuracy.

In any event, the approach EPA has chosen in setting short test standards is quite conservative; in order to avoid an excessive Ec rate, the standards have been set high. However, these standards will identify a substantial portion of any emissions above FTP standards. For current technology cars, these short tests and standards will identify approximately 75 percent of the excess emissions. The end result is an emission performance warranty program which will identify most high emitting vehicles and will have about the same Ec rate as the FTP. Accordingly, I conclude that the short test methods and procedures adopted are reasonably correlated with the FTP and are totally in keeping with the language and spirit of Section 207(b).

No short test for NOx emissions is being adopted at this time. NO_x emissions are more difficult to measure than HC and CO emissions and require a more demanding test procedure. Satisfying the correlation requirement for NO_x is an even more difficult task. Since the law does not specifically require that all three pollutants be covered by the short test, the Agency believes that omitting a test for NO_x at this time is justified. Further, to delay the emission performance warranty while a NO_x test is being developed would frustrate the Congressional intent to have a Section 207(b) warranty program established. Efforts will continue to be made to develop NO_x short tests, and a notice of proposed rulemaking will be issued if an adequate NO_x short test is developed. Lack of an NO_x short test does not detrimentally impact vehicle manufacturers since any additional requirements would only increase their exposure to warranty claims. No commenter objecting to the lack of such a test was able to suggest a simple, inexpensive test for NO_x.

Short Test/Standard Discussion

The idle test is adopted as an approved short test because it meets the statutory criteria and also because of its widespread use and simplicity. It is currently used by several jurisdictions in their inspection programs. A number of manufacturers make the equipment required to perform this test. This equipment is priced such that many garages, service stations, and dealerships are now using it in their normal maintenance work. It is also significant that the idle mode represents a substantial portion of the Federal Test Procedure, about 19 percent of the total test time. For that reason, even if correcting a vehicle's idle emissions did nothing to the non-idle modes it would still have the benefit of significant air quality improvements. However, the idle test does more. It accurately predicts excessive emissions from many operating modes by indicating the presence of defective parts and maladjustments. A vehicle with high idle

emissions will generally not pass the Federal Test Procedure.

A variation on the idle test is also approved as a short test. It is the two-speed idle, a sequence of idle-2500 rpm-idle. Results from the idle or 2500 rpm modes (or both) can be used. Also, the lowest HC and the lowest CO readings from the two low speed idle modes are combined to yield a composite score. This latter procedure gives the vehicle owner (and the manufacturer) the benefit of any test or vehicle variability.

The third approved short test is a two mode loaded procedure. It is a simplification of the proposed Federal Three Mode (42 FR 26754). The first test condition is a cruise at 30 mph under a dynamometer load of 9.0 hp. This test condition applies to all vehicles, and is followed by an idle in neutral. The single loaded test condition was adopted to promote efficiency and eliminate errors at the I/M lanes. It imposes a modest load on the vehicle's engine and should detect some malfunctions which are not apparent at idle.

The transient tests originally proposed (Federal Short Cycle and New Jersey/New York Composite) have not been adopted at this time due to the expense involved in purchasing and operating the necessary equipment.

A fixed set of standards applicable to all light duty vehicles and light duty trucks is being adopted in this regulation. This represents a change from the proposal. In the NPRM, standards were to be set for numerous groups of vehicles with similar technologies by testing large samples of then current model year vehicles. Since numerous problems with this approach were raised in comments on the NPRM, this approach has been modified. Rather than obtaining the maximum possible correlation (and correspondingly the most stringent standards) for each group of vehicles, a uniform standard is being adopted for a broad group of vehicles, i.e. all cars and light trucks. This approach is significantly less expensive since large numbers of cars from each group will not have to be tested to establish standards. Also, short test standards will be in place at the start of the model year and will not have to be delayed while the testing of assembly line, certification or in-use vehicles is completed. Finally, the actual standards will be known well in advance of the time they would have been under the previous approach. This will benefit the manufacturer's warranty repair stations, I/M officials and the general public in that the administrative burden to determine if short test standards have been issued for a particular vehicle will be eliminated. Under the NPRM, testing would have taken place at the start of the model year. Test results would be analyzed and short test standards for specific vehicle types would have been established. In order to ensure the greatest extent of warranty coverage standards would have been published as they were developed. Ascertaining if a vehicle was covered and what the standards were would be cumbersome. Of necessity, this uniform standard is less stringent. However, even with less stringent standards, large air quality impacts are possible because vehicles failing these short tests are the ones with the highest FTP emission levels. Also, the uniform standards will eliminate confusion and the burden on the I/M lane of determining what standard applies to a given vehicle with a particular engine.

Optional short tests and standards will be made available if those promulgated today are not appropriate for a particular vehicle type. An example would be a vehicle which meets certification standards while exceeding short test limits.

The short test standards were derived by examining current model, 1975 through 1977, light duty vehicles tested in EPA's Portland Oregon I/M evaluation program. (This program was designed to evaluate an actual I/M program for effectiveness and appropriateness of short test standards.) These vehicles have significantly higher emission standards than their 1981 and later counterparts. Since lower emission standards are applicable in 1981, future model year passenger cars should also have lower short test emissions. Thus, the standards derived from tests on 1975–1977 model year light duty vehicles are conservative; failure rates and errors of commission should be lower for light duty vehicles required to meet the 1981 standards, since those vehicles are required to meet more stringent requirements than the 1975 to 1977 models.

Since 1981 and later light truck emission standards were designed to be of equivalent stringency to 1977 passenger car emission standards, the Agency believes that it is appropriate to develop short test standards for light duty trucks from the Portland data. Cars and light trucks have used similar engines and emission control technologies, and when malfunctioning, truck engines will respond to short tests about the same as passenger cars. The higher numerical values for light duty trucks reflect the slightly higher weight and larger frontal areas.

Applicable Federal emission standards are listed in the table below:

Federal Emission Standards—g/mile

	Passenger cars		Light trucks—1981 and later [1]
	1975–79	1981 and later	
HC	1.5	0.41	1.7
CO	15.0	[2] 3.4	18.0

[1] More stringent standards expected in 1983.
[2] Possible waiver to 7.0 g/mile for 1981 and 1982 under Section 202 of the Clean Air Act.

As indicated above, the short test standards were developed from emission test results on 1975 through 1977 in-use light duty vehicles tested in EPA's Portland, Oregon project. Approximately 2200 vehicles were involved. The vehicles were borrowed from their owners and represent a cross-section of available emission control systems. Each vehicle was tested under the Federal Test Procedure and the proposed short tests. By means of a computer, a number of simulated short test standards were applied to the fleet. The vehicles which "failed" were checked to determine their FTP emissions. The percentage of excess emissions identified, as well as the failure rate and number of Ec's were noted. As a result of this analysis, EPA has determined that the short test standards shown in Table 1 are appropriate:

Table 1.—*Short Test Warranty Standards*

Test and mode	HC [1] (ppm)	CO (percent)
Idle: Idle	220	1.2
2-speed idle:		
2500 rpm	200	1.0
[2]Idle	200	1.0
Two mode loaded:		
30 mph loaded	220	1.2
Idle	220	1.2

[1] Ppm as hexane.
[2] Lowest readings observed of the two idle modes.

When these standards are applied to the Portland data base, the results shown in Table 2 are obtained. These short tests have acceptable error of commission rates while identifying a large portion of the excess (above standard) emissions. The FTP is shown for comparison purposes; its own test variability will produce an estimated 5.3% Ec's and less than 100% identification of excess emissions.

Table 2 shows the short test results. For example, if the idle mode of the two speed idle test is used, 37% of the Portland vehicles failed with 4% (of all vehicles) being failed incorrectly; 63% passed. The failed vehicles were responsible for 81% of the "excess" HC and 83% of the "excess" CO; "excess" meaning the total emissions over the certification standards. If the idle and

2500 RPM modes are combined, the failure rate rises to 42% with corresponding increases in the other parameters. While not all the vehicles which failed the FTP were detected, an extremely high percentage of the excess emissions were identified.

Table 2.—*Short Test Results*

[In percentage]

Test and mode	Failure rate	Errors of commission	Excess emissions identified	
			HC	CO
Idle Test: Idle	39	5.6	82	84
Two speed idle test:				
2500 RPM	22	2.8	60	59
Idle	37	4.0	81	83
Combined	42	6.0	87	90
Two mode loaded test:				
30 mph loaded	24	4.3	59	54
Idle	40	5.2	83	85
Combined	46	7.0	93	93
FTP: (Comparison only)	53	[1] 5.3	[2] 100	[2] 100

[1] Estimated from test variability.
[2] Actually slightly less than 100% due to test variability.
Standards: 1.2% CO/220 ppm HC except two speed idle 1.0% CO/200 ppm HC.

NOTES

Failure Rate—Percentage of all Portland vehicles that failed the short test.
Ec's—(Errors of Commission) Vehicles which failed the short test but met certification standards.
Excess Emissions Identified: The portion of emissions over the certification standard detected by the short test.

As indicated above, the results in Table 2 are for the 1975 to 1977 vehicles tested in the Portland study. Since 1981 and later passenger cars will be certified to lower emission levels they should be "cleaner" on the short test. Therefore, the figures given in Table 2 are numerically larger than those anticipated for 1981 and later passenger cars. On the other hand, light trucks in the 1981 model year will have similar emission control systems to the vehicles used to generate Table 2; therefore results should be similar.

A full development of the rationale behind these standards is contained in the report "Light Duty Vehicle and Light Duty Truck Emission Performance Warranty; Short Tests and Standards" which is in the Public Docket. Single copies are available from the address above.

An investigation was made of the suitability of the short tests for light trucks and of geographic variability of the tests for light duty vehicles. For this purpose, EPA's emission factor data for 1975 through 1979 cars and light trucks was used. (This data is routinely collected to quantify mobile source emissions.) No major differences from the analysis presented above were noted. Light trucks had lower failure and error of commission rates than passenger cars. Slight differences between the various cities existed; however, the basic functioning of the idle test was verified. The results of applying the idle standards resulted in a failure rate which ranged from 31% in Los Angeles to 52% in Phoenix compared to an average of 39% for all cities surveyed. Similarly the idle test errors of commission ranged from 2% in Denver to 7.3% in Phoenix compared to a 5.6% average for all cities surveyed. These differences can be attributed, in part, to the smaller sample sizes (which enhance variability) and differences in owner maintenance habits. California vehicles have stricter exhaust standards so Los Angeles had fewer short test failures. Conversely, at high altitudes vehicle emissions increase and more cars will exceed their emission standards.

Therefore, errors of commission will decrease because there are fewer cars for the short test to incorrectly fail. (For the same reasons, similar variations would occur if this analysis were performed for the other short tests.) This acceptable level of geographic variability confirms the general applicability of the short tests. A more detailed evaluation can be found in the report cited above.

No altitude limit has been set for the short test. The same factors affecting short test emissions at high altitudes also impact results on the full FTP procedure. Results from an examination of Denver data bear this out: an overall 50% failure rate with only 2% errors of commission. This performance meets the criteria for short tests. However, Congress debated requirements for high altitude emissions certification, and has established a 4000 foot limit for low altitude standards. Since there is presently no certification test conducted at high altitude, the emission performance warranty will not be available initially at elevations over 4000 feet. Once EPA has adopted new high altitude emission standards (projected for 1982) the warranty can then be made available.

The Agency has recently proposed high altitude emission standards for light duty vehicles (LDVs) and light duty trucks (LDTs), 45 FR 5988, January 24, 1980. The following limits have been published for comment:

Proposed High Altitude Standards (g/mile)

	Year	HC	CO
LDV	1982/83	0.57	7.8
LDT	1982	2.0	26.0
	1983	1.0	14.0

Except for 1982 light trucks, all these standards are below the LDV certification standards for 1975 through 1977, which are 1.5 g/mile HC and 15.0 g/mile CO. As stated above, an analysis of high altitude test results (in Denver) on 1975 through 1977 passenger cars shows that correlation exists between the certification procedure and the short tests. When more stringent certification standards are promulgated this correlation will still exist; such vehicles will be "cleaner", and their short test results will be lower. By similar reasoning, errors of commission will be reduced because of the increased stringency of the certification standards. So, except for the proposed 1982 LDT standards, the Section 207(b) criteria for a high altitude emission performance warranty have been satisfied. When such high altitude standards are promulgated the warranty will be available, except for 1982 light trucks.

The proposed 1982 LDT high altitude standards represent an 18% increase in HC (1.7 to 2.0 g/mile) and a 44% increase in CO (18 to 26 g/mile) from the applicable low altitude standards. The 1982 low altitude LDT standards were developed to be of equal stringency to the 1975 through 1977 LDV standards. (Increases in the standards were needed to compensate for the higher weight and larger frontal areas of light duty trucks.) To estimate how such 1982 high altitude trucks will respond to the short test, data from 1975 through 1977 passenger cars tested in Denver have been reviewed. But, instead of using the passenger car certification standards (1.5 HC, 15.0 CO), standards equivalent in stringency to the proposed 1982 light

truck limits have been substituted. This calculation results in standards of 1.76 g/mile HC, an 18% increase, and 21.8 g/mile CO, a 44% increase. (These percentage increases are the same as for 1982 light trucks from low to high altitudes.) Evaluating the high altitude data against these derived limits yields the following: 50% idle test failures and 3.9% Ecs.

This analysis was performed using idle test results and the short test standards adopted herein. Based on the relationship between short test and FTP emissions, similar results can be expected for the other short tests.

These short test regulations will take effect for 1982 LDTs at high altitude when high altitude certification standards are promulgated for that model year. However, if the light truck high altitude standards for 1982 are less stringent than those proposed, this matter will be re-examined in a subsequent rulemaking.

Diesel vehicles are covered by the adopted short tests. EPA believes that there are no failure modes peculiar to diesels which would result in a loss of correlation. No specific comments were made on this issue. Moreover, diesels operate with very lean fuel/air mixtures resulting in very low hydrocarbon and carbon monoxide emissions under short test conditions. Only in the case of a major fault in the fuel system could emissions increase dramatically such that the vehicle would fail the short test. Thus, the percentage of Ec's should be less than that for gasoline-powered vehicles.

The standards set forth in this regulation are the minimums at which the Section 207(b) warranty may be invoked. States and local jurisdictions are free to set less stringent standards for their I/M programs; in such cases, a warranty remedy will also be available, but only for those vehicles which fail the state inspection. (Section 207(b) requires that a penalty or sanction be imposed before the warranty can be invoked.) While it is not anticipated that any I/M programs will have more stringent standards, under those circumstances the warranty would be available only to those vehicles which failed both sets of standards. (I/M programs will not generally need to use as stringent standards to meet their air quality requirements.) It would not be available if the vehicle fails inspection but not the standards adopted herein. For example, a vehicle with 0.7% CO at idle would fail an I/M standard of 0.5%; it would not qualify for warranty because the standard is 1.2% which the vehicle would meet.

Public Participation

Slightly less than 100 written comments were received in response to the NPRM and testimony at three public "workshops". Private citizens, the service industry, local governments, civic organizations, parts and automotive manufacturers were all represented. Most comments were general; a few went into great detail on the technical aspects. Of the general comments, many were concerned with the overall desirability of I/M programs. EPA's position on the major statutory issues has been outlined in the previous sections. A complete response to the comments has been prepared and is attached as an appendix.

In December 1979, the Motor Vehicle Manufacturers Association (MVMA) filed a petition with EPA requesting that a new Notice of Proposed Rulemaking be issued on Section 207(b) short tests. MVMA cited the passage of time, new developments and changed circumstances as reasons for a reproposal. This Agency believes that the rules promulgated today are within the scope of the original NPRM. Nevertheless, the comment period was reopened to give MVMA and the public an opportunity to comment on data generated since the close of the original comment period and on EPA's current approach to short tests and standards. Twelve parties responded during the reopened comment period, and their comments have been considered in developing the final regulations.

MVMA also filed a supplement to its original petition asserting that the additional time allotted for comments was inadequate. MVMA's submissions have been reviewed, and EPA's response is being published today in the **Federal Register**. The Agency's response to MVMA's petition and supplement to its petition has also been made part of the record of this rulemaking.

Copies of all comments, rulemaking support documents and other materials relevant to this rulemaking are contained in Docket A–79–57. The docket may be reviewed at the U.S. Environmental Protection Agency, Central Docket Section, Room 2903 B (EPA Library), Waterside Mall, 401 M Street S.W., Washington D.C. 20460. Copies of all items in the docket may be obtained. As provided in 40 CFR Part 2, the Agency may charge a reasonable fee for copying services.

Proprietary Rights

Users of the processes required under the regulations below should be aware that any of them may be subject to claims that all or portions of the processes involve proprietary rights. For example, the Clayton Manufacturing Company alleges that the process covered by Clayton's U.S. Patent 3,998,095 may be involved in the Federal Two-Mode Test (see § 85.2214(b)(4)). Except as EPA specifically otherwise informs potential users, EPA takes no position on the validity of allegations of infringement of proprietary rights. Whenever EPA becomes aware of such claims, however, EPA will try to inform potential users. We request that users inform us of such claims made against them, so that we can in turn pass that information on to other potential users.

Evaluation Plan

EPA intends to review the effectiveness and need for continuation of the provisions contained in this action no more than five years after initial implementation of the final regulations. In particular, EPA will solicit comments from affected parties with regard to cost and other burdens associated with compliance and will also review data on the gaseous emissions from vehicles built before and after implementation of the regulations to determine how effective this measure has been.

Reporting and Record-Keeping Requirements

This rulemaking will not impose additional reporting or record-keeping requirements. Under EPA's recently established "sunset" policy, the reporting requirements of a regulation normally expire after five years unless action is taken to extend them.

Note.—The Environmental Protection Agency has determined that this document is not a significant major regulation requiring the preparation of a regulatory analysis under Executive Order 12044.

Dated: May 12, 1980.

Douglas M. Costle,

Administrator.

Part 85 of Chapter I, Title 40 of the Code of Federal Regulations is revised as follows:

1. The title of Part 85 is amended to read:

PART 85—CONTROL OF AIR POLLUTION FROM MOTOR VEHICLES AND MOTOR VEHICLE ENGINES

2. A new Subpart W is added:

Subpart W—Emission Control System Performance Warranty Short Tests

Sec.

85.2201 Applicability.
85.2202 General provisions.
85.2203–81 Short test standards for 1981 and later model year light-duty vehicles.
85.2204–81 Short test standards for 1981 and later model year light-duty trucks.

85.2205 to 85.2210 [Reserved]
85.2211 Alternative standards and procedures.
85.2212 Idle test.
85.2213 Two-speed idle test.
85.2214 Loaded test.
85.2215 Exhaust sampling system.
85.2216 Dynamometer.
85.2217 Calibrations, adjustments.
85.2218 Test report.

Authority: Sec. 207, 301(a), Clean Air Act as amended (42 U.S.C. 7545 and 7601(a))

§ 85.2201 Applicability.

This subpart contains the short test and standards to be employed in conjunction with the Emission Performance Warranty, Subpart V.

§ 85.2202 General provisions.

The definitions and abbreviations in Subpart A of Part 86 of this chapter apply to this subpart.

§ 85.2203-81 Short test standards for 1981 and later model year light-duty vehicles.

(a) For 1981 and later model year light duty vehicles at low altitude, and for 1982 and later model year light duty vehicles at high altitude to which high altitude certification standards of 1.5 g/mile HC and 15 g/mile or less apply, short test emissions shall not exceed.

(1) Idle test.

(i) *Hydrocarbons:* 220 ppm as hexane.

(ii) *Carbon monoxide:* 1.2%.

(2) Two speed idle test, idle mode. The lowest readings from the two idle modes shall be used to determine compliance.

(i) *Hydrocarbons:* 200 ppm as hexane.

(ii) *Carbon monoxide:* 1.0%.

(3) Two speed idle test, high speed mode.

(i) *Hydrocarbons:* 200 ppm as hexane.

(ii) *Carbon monoxide:* 1.0%.

(4) Loaded test, idle mode.

(i) *Hydrocarbons:* 220 ppm as hexane.

(ii) *Carbon monoxide:* 1.2%.

(5) Loaded test, low speed mode.

(i) *Hydrocarbons:* 220 ppm as hexane.

(ii) *Carbon monoxide:* 1.2%.

§ 85.2204-81 Short test standards for 1981 and later model year light-duty trucks.

(a) For 1981 and later model year light duty trucks at low altitude, and for 1982 and later model year light duty trucks at high altitude to which high altitude certification standards of 2.0 g/mile HC and 26. g/mile CO or less apply, short test emissions shall not exceed:

(1) Idle test.

(i) *Hydrocarbons:* 220 ppm as hexane.

(ii) *Carbon monoxide:* 1.2%.

(2) Two speed idle test, idle mode. The lowest readings from the two idle modes shall be used to determine compliance.

(i) *Hydrocarbons:* 200 ppm as hexane.

(ii) *Carbon monoxide:* 1.0%.

(3) Two speed idle test, high speed mode.

(i) *Hydrocarbons:* 200 ppm as hexane.

(ii) *Carbon monoxide:* 1.0%.

(4) Loaded test, idle mode.

(i) *Hydrocarbons:* 220 ppm as hexane.

(ii) *Carbon monoxide:* 1.2%.

(5) Loaded test, low speed mode.

(i) *Hydrocarbons:* 220 ppm as hexane.

(ii) *Carbon monoxide:* 1.2%.

§§ 85.2204 to 85.2210 [Reserved]

§ 85.2211 Alternative standards and procedures.

(a) As a part of the certification process, as set forth in § 86.078 et seq., a manufacturer may request an alternative short test standard or short test procedure for any vehicle or engine for which the standards or procedures specified in this subpart are not appropriate. The manufacturer shall supply relevant test data and technical support to substantiate his claim and shall also recommend alternative test procedures and/or standards for the Administrator's consideration. Upon an acceptable showing that the general standards or procedures are not appropriate, the Administrator shall set through rulemaking procedures alternative standards or procedures. The administrative provisions of the certification process (see § 86.078 et seq.), apply to such a request for alternative standards or procedures.

(b) Any such alternative standard or test procedure must be specified on the emission control information label to be effective for that particular vehicle or engine.

§ 85.2212 Idle test.

(a) *General requirements:* Vehicles shall be tested in as-received condition. Engines shall be at normal operating temperature and not overheating (as indicated by gauge warning light or boiling radiator) with all accessories off.

(b) *Test Sequence.* (1) Analyzers shall be warmed-up, in stabilized operating conditions and adjusted as required in § 85.2217.

(2) Optional: The engine may be preconditioned by operating it at 2500± 300 rpm for up to 30 seconds.

(3) With engine idling and transmission in neutral, the sample probe shall be inserted into the tailpipe. Record exhaust concentrations after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first. This process shall be repeated as necessary for multiple exhaust pipes. However, multiple readings are not necessary for exhaust originating from a common point.

(4) Results from multiple exhaust pipes shall be numerically averaged.

§ 85.2213 Two speed idle test.

(a) *General requirements:* Vehicles shall be tested in as-received condition. Engines shall be at normal operating temperature and not overheating (as indicated by gauge warning light or boiling radiator) with all accessories off.

(b) *Test Sequence.* (1) Analyzers shall be warmed-up, in stabilized operating conditions and adjusted as required in § 85.2217.

(2) Attach tachometer pick up.

(3) With engine idling and transmission in neutral, the sample probe shall be inserted into the tailpipe. Record exhaust concentrations after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first. This process shall be repeated as necessary for multiple exhaust pipes. However, multiple readings are not necessary for exhaust pipes originating from a common point.

(4) The engine speed shall be increased to 2500 ± 300 rpm, with transmission in neutral. Record exhaust concentrations after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first. Repeat as in subparagraph (3) for multiple exhaust pipes, if necessary.

(5) The engine speed shall be reduced to free idle with transmission in neutral. Record exhaust concentrations after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first. Repeat as specified in subparagraph (3) for multiple exhaust pipes, if necessary.

(6) For vehicles with multiple exhaust pipes, the separate results from each pipe for each mode (subparagraphs (3), (4), and (5) above) shall be numerically averaged for each pollutant.

(7) The idle mode final results shall be the lowest HC and lowest CO readings from steps (3) and (5).

(c) Exhaust concentration measurements from both the idle mode and the high speed mode are not required. The short test may be used to evaluate emissions from either mode alone or from both modes, the choice being made by the jurisdiction implementing the inspection program. If exhaust concentrations are not measured on a given mode, the vehicle shall be operated at the specified test condition for 15 to 30 seconds. The final idle mode, paragraph (b)(5) of this section, may be omitted if only high speed mode exhaust concentrations are to be measured or if the vehicle is below idle standards on the first measurement, paragraph (b)(3) of this section. The high speed mode and final idle mode may be

omitted if only idle mode exhaust concentrations are to be measured and if the vehicle is below idle standards on the first measurement.

§ 85.2214 Loaded test.

(a) *General requirements.* Vehicles shall be tested in as-received condition. Engines shall be at normal operating temperature and not overheating (as indicated by gauge, warning light or boiling radiator) with all accessories off. An auxiliary cooling fan is optional.

(b) *Test Sequence.* (1) The dynamometer and analyzers shall be warmed-up, in stabilized operating conditions and adjusted as required in §§ 85.2216 and 85.2217.

(2) The vehicle shall be placed on the dynamometer.

(3) The sample probe shall be inserted into the tailpipe.

(4) Optional: A high speed mode, maximum 50 mph and 30 seconds duration, is permitted if vehicle overheating does not occur.

(5) Drive for automatic or 3rd gear for manual transmissions shall be used. The vehicle shall be operated at 30 ± 1 mph roll speed while measuring exhaust HC and CO. Record exhaust concentrations after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first. This process shall be repeated as necessary for multiple exhaust pipes. However, multiple readings are not necessary for exhaust pipes originating from a common point.

(6) The vehicle shall be idled in neutral. Record exhaust concentrations after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first. Repeat as specified in subparagraph (5) of this paragraph for multiple exhaust pipes, if necessary.

(7) For vehicles with multiple exhaust pipes, the separate results from each pipe for each mode (subparagraphs (5) and (6) of this paragraph) shall be numerically averaged for each pollutant.

(c) Exhaust concentration measurements from both the loaded mode and the idle mode are not required. The short test may be used to evaluate emissions from either mode alone or from both modes, the choice being made by the jurisdiction implementing the inspection program. If exhaust concentrations are not measured on the loaded mode the vehicle shall be operated at the specified test condition for 15 to 30 seconds. If idle exhaust concentrations are not measured, the idle mode may be omitted.

§ 85.2215 Exhaust sampling system.

(a) The exhaust sampling system shall consist of a sample probe, moisture separator and analyzers for HC and CO.

(b)(1) The HC analyzer shall have an accuracy of ± 15 ppm at 200 to 220 ppm concentration HC (as hexane); the CO analyzer shall have an accuracy of ± 0.10% CO from 1.0% to 1.2% concentration.

(2) Response time of the analyzers shall be 15 seconds to 95% of the final reading.

(3) Analyzer drift (up-scale and down-scale zero and span wander) shall not exceed ± 0.1% CO and ± 15 ppm HC (as hexane) on the lowest range capable of reading 1.0% CO or 200 ppm HC (as hexane) during a one-hour period.

§ 85.2216 Dynamometer.

(a) The loaded test dynamometer shall be adjusted to produce a load of 9.0 ± 1.0 hp at 30 mph.

(b) Speed shall be measured from the dynamometer roll(s) with an accuracy of ± 1.5 mph at 30 mph true roll speed.

§ 85.2217 Calibrations, adjustments.

(a) Equipment shall be calibrated in accordance with the manufacturers' instructions.

(b) Within one hour prior to a test, the analyzers shall be zeroed and spanned. Ambient air is acceptable as a zero gas; an electrical span check is acceptable. Zero and span checks shall be made on the lowest range capable of reading the short test standard.

(c) Within eight hours prior to a loaded test, the dynamometer shall be checked for proper power absorber settings.

(d)(1) The analyzers shall have been spanned and adjusted, if necessary, using gas traceable to NBS standards ± 2% within one week of the test. These span gases shall have concentrations either:

(i) Between the standards specified in this subpart and the jurisdictions inspection standards for 1981 model year light duty vehicles, or

(ii) Be within −50% to +100% of the standards in this subpart.

(2) For analyzers with a separate calibration or span port, CO readings using calibration gas through the probe and through the calibration port shall be made; discrepancies of over 3% shall require repair of leaks. No analyzer adjustments shall be permitted during this check.

§ 85.2218 Test report.

(a) Upon failure of a short test, the vehicle's operator or owner shall be furnished with a test report containing:

(1) Vehicle description, including either license plate or manufacturer's identification number, and odometer reading.

(2) Date of test.

(3) Name of individual or organization performing the test and location thereof.

(4) Type of short test performed.

(5) Test results, exhaust concentrations for each mode measured.

(b) The test report shall certify that the short test was performed in accordance with these regulations and it shall be signed by an individual who either performed the test or has actual knowledge of the performance of the test.

(c) For purposes of this section, "failure of a short test" means that the vehicle exceeded the standards in this subpart or the Inspection/Maintenance standards of the jurisdiction, whichever is less stringent.

(Sec. 207, 301(a) of the Clean Air Act, as amended (42 V.S.C. 7545 and 7601(a)))

Appendix—Analysis of Comments

Emission Performance Warranty Short Test and Standards

Note.—This Appendix will not appear in the Code of Federal Regulations.

Table of Contents

I. Introduction
II. Statutory Requirements
III. General
IV. Summary and Analysis of Comment
A. *Legal*
1. Procedure
2. Proposed Alternatives
3. De Facto Standards
4. NOx Measurement Required
5. Lead Time
6. Production Short Test
7. Light Duty Truck Coverage
8. Manufacturer Testing
9. Regulatory Language
B. *Availability*
1. Ability To Ascertain Compliance
2. Real World Demonstration
3. Idle Test Recommended
C. *Good Engineering Practice*
1. Performance in Actual Use
2. Variability
3. Short Test Structure
D. *Correlation*
1. Classical Correlation Required
2. Reasonable Correlation
3. Fundamental Relationship
4. FTP Problems
5. Short Test for Certification
6. Future Technology Vehicles
7. Contingency Tables
8. Data Base
9. FTP Errors of Commission
10. Errors of Omission
11. Tampered Vehicles
E. *Standards*
1. Criteria
2. Timing
3. Setting Procedure
4. Errors of Commission

5. Vehicle Grouping
6. High Altitude
7. Optional Standards
F. *Short Test*
1. Recommendation
2. Preconditioning
3. Idle Test Procedures
4. Idle RPM
5. Data Submission
6. Variability
7. Garage Instruments
8. Miscellaneous Comments

I. Introduction

On May 25, 1977, the Environmental Protection Agency proposed regulations to establish a short test and standards for an emission performance warranty (42 FR 26742). The emission performance warranty is intended to complement state inspection/maintenance programs. Under these "I/M" programs, a vehicle owner is required to submit his car for inspection on a periodic basis. If, as determined by the "short test," the vehicle has excessive emissions, some type of repair is mandated. Pursuant to Section 207(b) of the Clean Air Act, the vehicle manufacturer, under certain circumstances, is liable for the cost of repairs. This document addresses only the short test and its associated emission standards. The actual emission performance warranty regulations are the subject of a separate rulemaking and were proposed for comment on April 20, 1979, 44 FR 23784.

The comment period was reopened on January 31, 1980, for thirty days. Comments were solicited on EPA's current positions and data not available at the time of the original NPRM.

The short test notice of proposed rulemaking (NPRM) contained five recommended short tests and an equal number of standard setting methods. These multiple proposals were designed to generate comments encompassing the entire field of possible solutions. Since that NPRM, the area of consideration has been reduced substantially. In this regard, the diverse views and information presented by the commenters have been most helpful.

II. Statutory Requirements

In order to understand the public comments discussed below, it is necessary to be familiar with the requirements of the Clean Air Act, Section 207(b).

If the Administrator determines that

(i) There are available testing methods and procedures to ascertain whether, when in actual use * * * each vehicle * * * complies with emission standards,

(ii) Such methods and procedures are in accordance with good engineering practices, and

(iii) Such methods and procedures are reasonably capable of being correlated with (certification tests) then * * *

He shall establish such methods and procedures by regulation * * * (emphasis added).

It should be noted that the Administrator has no discretion whether to establish the short test once the requisite three findings have been made. In addition to the short test and standards, the Administrator is required to promulgate the actual warranty regulations requiring no-cost repairs by the manufacturer. (These no-cost repairs are conditioned upon certain time and mileage limitations as well as maintenance requirements.) It is certain that the Congress felt very strongly about enforcing the manufacturers' obligation to produce vehicles which conform to the emission standards while in actual use. Unlike some other provisions of the Clean Air Act, under Section 207(b) the Agency is not required to make determinations concerning the cost or effectiveness of the emission performance warranty.

III. General

In all, slightly less than 100 comments were recieved in response to the original Notice of Proposed Rulemaking; twelve comments were made during the reopened comment period. Included were individuals, small businesses, civic organizations, government agencies and the automotive industry. All five major domestic manufacturers commented, as well as many of the larger foreign vehicle manufacturers. The small businesses which commented were in the automotive repair industry. Those state and local governments which commented either had or were considering adopting their own inspection/maintenance programs. The commenters represented a cross section of those individuals and organizations most likely to be affected by the adoption of short tests and standards.

A majority of the comments were opposed to the proposed regulations. A few individuals, the civic organizations and local governments supported the proposal.

Comments submitted by the manufacturers dealt primarily with the three statutory requirements. Their comments raised rather detailed, technical matters which are addressed below. The small businesses, mostly automotive repair shops, complained that the proposal would have anti-competitive and monopoly aspects. This allegedly would result from the owner having more incentive to use the manufacturer's dealers for repair purposes. Citizens who objected to the NPRM were opposed for both philosophical and other reasons. Some citizens objected to further regulation by the Federal government, and assumed that the regulations would force adoption of Inspection/Maintenance programs. They also complained that the costs of the program would be passed on in the form of higher vehicle prices. Several suggested that Inspection/Maintenance programs be combined with existing safety checks. Many comments are not germane to the three statutory requirements, and will not be addressed here. It should be pointed out that the short test regulations will not impose I/M programs; they will merely establish an approved short test and associated standards. Implementation of I/M programs will be done by state and local governments.

Commenters in support of the regulations felt that the emission performance warranty would be an incentive for vehicle owners to get repairs and thus result in an air quality improvement. Also, the manufacturers would have an incentive to reduce warranty costs and thus make their emission control systems more reliable. Again, this would result in an air quality improvement. One vehicle manufacturer supported the I/M concept when used to detect gross emitting vehicles, but not when it was aimed at those marginally above emission standards.

All comments submitted in response to the original NPRM and during the recently reopened comment period have been carefully reviewed. Those comments which are relevant to the statutory requirements have been combined and summarized. The final rulemaking has been modified to incorporate many of the suggestions. Comments have been divided into six broad categories (Legal, Availability, Good Engineering Practice, Correlation, Standards, Short Test), with particular items addressed as subtopics. Where appropriate, comments during the reopened comment period have been so identified.

IV. Summary and Analysis of Comments

A. Legal

1. Procedure. Comment: The proposed regulations should be considered to be an advanced Notice of Proposed Rulemaking. The supporting data set was incomplete; proposed rulemaking should have been deferred until the Portland study was finished. This will allow all parties time to review the basis for the proposed rules and permit evaluation of the data before the final rules were promulgated.

Response: The course of action suggested would have delayed the entire program by several years. Adequate data existed at the time of the NPRM to satisfy the statutory criteria. Basic relationships between short test and FTP emissions were established; subsequent data from Portland (and other programs) merely refined these relationships.

Comment: The reopened comment period was too short. Thirty days is entirely inadequate to sufficiently analyze all the new data and information which has only recently been made available. (The Portland report contains over 500 pages of data; it is impossible to analyze all this data in the time available). Further, it is impossible to thoroughly examine the interaction of the short test regulations with the aftermarket parts certification regulations, and the emission performance warranty regulations both of which have been recently proposed.

Response: The agency disagrees that the comment period was too short. In its comment, the Motor Vehicle Manufacturers Association stated that they reproduced EPA's calculations, performed additional calculations and data analysis, and were able to submit 130 pages of analysis and data presentations. While it may be true that further data analysis could have been performed had additional time been available, only two firm suggestions for additional analysis were made. The first suggestion for further analysis was that the Portland data be examined to see if particular engine families were treated unfairly by the proposed tests. As stated in the technical report, EPA sorted the data by engine displacement and catalyst usage. Minor differences in failure and error of commission rates were noted. The report recommended that special short test standards be established for those vehicles for which the general short test standards are not appropriate. Procedures to accomplish this have been incorporated into the regulations. The second suggestion was that additional data be analyzed to estimate the actual reduction in air pollution, rather than the potential reduction. Such an analysis is not required to support promulgation of the short tests; it would be more appropriately directed at determining the overall effectiveness of I/M programs. A short test can only identify vehicles needing repairs. The repairs made determine the actual benefit. (It is difficult to imagine what would be shown by such an analysis that would indicate the short tests should not be adopted. If repairs are effective the short tests would be supported. But, even if current repairs are not effective that would not establish the effectiveness of warranty repairs.)

While it is true that the Portland report contains extensive listings of data, this information, in the form of a computer tape, was available upon request, and was, in fact, supplied to MVMA. Further, not all of the Portland data was relevant to this rulemaking. MVMA was able to check EPA's calculations using this data and was able to supply analysis from different data sets. It seems rather unlikely that any significant new revelations would have occurred had a substantially longer comment period been granted.

The aftermarket parts and warranty regulations have no impact upon the short test regulations. The 207(b) short test regulations have been established in accordance with the statutory criteria in the Clean Air Act. Those criteria do not include an analysis of the warranty and aftermarket parts certification regulation. Although the short test regulations are prerequisites to implementing the warranty regulations, they could have been promulgated before the warranty and aftermarket parts regulations were proposed. Indeed, some commenters felt this is the course EPA should have followed. The only "impact" the short test has on the other regulations is that, depending on the short test standards, it may affect the number of vehicles failing I/M. The end result may be that a manufacturer has more warranty claims, but this fact does not require an extensive new comment period. The obligation to build vehicles which comply with emission standards for their useful life is already imposed by the Clean Air Act. Nevertheless, EPA granted an opportunity to comment on the impact which any change in the short test proposal or new data would have on the other two proposed regulations. No comments were received. The 207(b) short test regulations are only concerned with the statutory criteria in the Clean Air Act. The emission performance warranty rules and aftermarket parts certification regulations are independent.

The comment period was reopened in part to solicit comments on data or analysis not available previously. In addition, the Agency's current thinking on the substance of the regulations was set forth in the notice. Interested parties were invited to submit their views on those short tests and standards.

It should also be noted that the Motor Vehicle Manufacturers Association was given an advance notice that the comment period would be reopened. So, instead of the thirty days, the manufacturers in effect had over forty days to prepare comments. And, in the same vein, the data and analysis which prompted the reopening of the comment period had been made available to MVMA over two months prior to the closing of the comment period. (One MVMA member had the data for more than 6 months from the start of the comment period.)

2. Proposed Alternatives. Comment: It is impossible to comment on all possible combinations of short test and cutpoint selection methodologies.

Response: Comments on each combination were certainly not required or expected. Many manufacturers commented on each short test as well as on each cutpoint method; there was no logical reason to comment on each combination.

3. De Facto Standards. Comment: Congress did not intend to authorize any emission standards other than those already established. Therefore, the emission performance warranty requirements should not establish a new set of de facto requirements to which the manufacturers must design.

Response: It is required by statute that short tests and standards must reasonably correlate with the existing certification test. Since the two procedures must be correlated, the manufacturer will face no additional burden in certifying his vehicles. The final regulations recognize this concern and are structured so that the possibility that vehicles complying with the certification standards will fail the short test is very small.

Comment: Correlation was required by Congress so that the manufacturer will only have one engineering goal to attain. Otherwise, it would be possible to have to design to both the certification and to the short tests, and these goals might conflict.

Response: The short test standards adopted eliminate this concern. The correlation requirement is satisfied in that the short tests do not fail, in significant numbers, vehicles which comply with the certification standards. The number of incorrect failures (errors of commission) will be about the same as if the certification test itself had been used. A manufacturer who designs vehicles to comply with the certification standards over the vehicle's useful life (as required by law) will not be subject to unnecessary warranty claims.

4. NO_x Measurement Required. Comment: Congress intended that any short test adopted must measure and evaluate NO_x emissions.

Response: The Agency rejects this viewpoint. Section 207(b) does not specifically require measurement of all

three pollutants. It is unreasonable to attribute such a desire on the part of Congress where the net result would be to frustrate the very intent of Congress in adopting Section 207(b), i.e., that once a reasonable means of determining vehicle noncompliance is developed that can be used in state I/M programs, then manufacturers under the circumstances described in Section 207(b)(2) (A) through (C) should pay for repairs necessary to bring into compliance a vehicle that has failed an I/M test. Further, the vehicle manufacturers who made this comment will certainly not be prejudiced by exclusion of NO_x emissions from the short test. Any test procedure which would fail vehicles for excessive NO_x emissions would potentially result in their having to pay a larger number of warranty claims. EPA is continuing to work on a short test and standards for NO_x. There is no reason to delay the entire program until the NO_x effort is complete.

The approach taken by the Agency established correlation as the ability to identify failing vehicles. A vehicle which fails only one pollutant (on the FTP) does not comply with the emission standards. Once a vehicle fails for HC or CO, testing for NO_x is not necessary. EPA recognizes that this approach will fail to detect some vehicles with excessive NO_x emissions. This course is necessary because inclusion of NO_x measurement would dictate a more expensive loaded test with additional instrumentation; this procedure may not be as "available" to private garages in decentralized I/M programs as an HC and CO only test.

5. *Lead Time.* Comment: The Agency must allow for eighteen months (prior to production) between promulgation and the effective date of the regulations. This allows the manufacturer time to design for the short test. Otherwise, it is possible that a manufacturer will design a system which will subsequently not be able to pass the short test when it is sold. This would result in an unconstitutional lack of due process; penalties would be imposed without the ability to avoid them.

Response: The question of lead time is addressed in the Clean Air Act. The only requirement is that the subject vehicles be manufactured "in a model year beginning after the Administrator first prescribes warranty regulations under this paragraph." There is no requirement for any additional lead time. Further, lead time is not necessary since the Act requires that the short test be "reasonably capable of being correlated" with the certification test. A class of vehicles designed to meet the certification requirements will, in fact, pass the short test and its standards. If new technology is developed which has different characteristics, specific optional standards will be applied to such vehicles. No additional design burden will be created by the regulations.

Comment: If promulgated for the 1981 model year, there will be inadequate lead time for the manufacturers to react to the emission performance warranty regulations. Since designs have been fixed and commitments have been made to purchase the necessary emission control hardware, these regulations will have a retroactive effect.

Response: Section 207(b) of the Clean Air Act requires that the regulations be promulgated prior to the model year for which they apply. The requirement that the approved short test be "reasonably capable of being correlated" with the certification test ensures that there will be no increased burden placed upon the manufacturer by these regulations. Therefore, concerns about inadequate lead time are not justified. Further, Section 207(a) of the Clean Air Act requires that manufacturers build vehicles that are capable of meeting emission standards for their useful life. The regulations being promulgated will only aid in enforcing an obligation that already exists.

6. Production Test. Comment: The Congress intended that the Section 207(b) short test must correlate with any production line short test. (Reference—Clean Air Act Conference Report, page 171, HR 6161).

Response: To date, no production line short test has been adapted. This concern will be addressed in the future.

7. Light Duty Truck Coverage. Comment: Inclusion of light duty trucks in the NPRM was improper. The data base for proposed rulemaking considered only passenger cars and not light trucks. Since light trucks perform an entirely different function than passenger cars, any regulation of them must be supported by a separate light truck data base.

Response: Light-duty trucks are tested for emissions certification by the same procedure as passenger cars. As concluded in the previous light duty truck rulemaking (41 FR 55345; December 20, 1976), the majority of light trucks are personal use vehicles performing the same function as passenger cars. Many of the mechanical and emission control components used on these vehicles are very similar (or even identical) to the components used on passenger cars. Finally, standards for 1979 and later light trucks were established to be of the same stringency as 1977 passenger car limits. (The car standards were adjusted to account for the slightly heavier weights and larger frontal areas.) With all of these common points, the Agency believes use of the same short tests is both logical and justified.

Comment: It is inconsistent for EPA to state that the short tests and standards are appropriate for both light duty vehicles and light duty trucks beginning in the 1981 model year. There are significant differences in emission control technology that should result in different responses to the short test. Light duty trucks will experience an error of commission rate greater than 5%; there were no light duty trucks tested in Portland and EPA has not done enough testing to justify their inclusion in this rulemaking.

Response: It is acknowledged that light duty trucks will be treated somewhat more severely than will the passenger cars. (Passenger cars will have more advanced emission control systems to meet the more stringent certification standards. These emission controls should also give an advantage in passing the short test standards.) However, 1981 and later trucks will have the same types of emission control systems as were found on vehicles forming the basis for the Technical Report and therefore should experience a 5% Ec rate. One hundred seventy five trucks tested in EPA's emissions factors program substantiate that the short test standards are appropriate for this class of vehicle. (See Technical Report Figure 8.) As data is gathered on advanced technology vehicles, EPA will evaluate the feasibility of revising short test standards for passenger cars. No substantiation has been offered for the assertion that the standards are not appropriate for light trucks.

Short test standards for 1981 light trucks (and passenger cars) were derived from EPA's Portland program. Data from 1975 through 1977 model year cars were used to establish short test levels which will yield acceptable correlation. Since 1981 light trucks will employ similar emission control systems (and many other components as well) as the passenger cars in the data base, the short test standards thus developed will be appropriate.

EPA evaluated data on 1975 through 1978 model trucks tested in various cities under the emission factors program. Results on the idle test and FTP were compared for short test and certification standards. Results compared closely to that observed for passenger cars in the same test program. (See Technical Report Figure 8.)

	In percentage	
	Failures	Ec's
Cars	39	5.4
Trucks	31	3.6

This data supports incorporating light trucks.

8. Manufacturer Testing. Comment: EPA does not have authority to require manufacturer testing to establish emission performance warranty standards.

Response: The requirement for manufacturer testing has been deleted.

9. Regulatory Language. Comment: In order to fully comment it is necessary that the specific regulatory language be disclosed. This was not done.

Response: In the original NPRM, the specific text of the proposed short test regulations was provided. Refinements reflected in the final rule were derived from the proposal and comments received thereon. Accordingly, reproposal was unnecessary. Moreover, as part of the notice extending the comment period (45 FR 6960), EPA provided a summary of the short tests then under consideration. This summary was consistent with Administrative Procedure Act rulemaking provisions that require only the "substance" or "a description of the subjects and issues involved" in the rule be provided. 5 U.S.C. Section 553(b). Accordingly, EPA rejects this comment.

B. Availability

1. Ability to Ascertain Compliance. Comment: The five proposed tests are available, but the statute requires that they be available to ascertain compliance with the Federal Certification standards. This has not been demonstrated.

Response: The Agency does not agree with this viewpoint. The Clean Air Act specifies in Section 207(b) that the emission performance warranty can take effect only after it is established that "* * * there are available testing methods and procedures to ascertain whether * * * each vehicle * * * complies with the emission standards * * *" While this language could be read as sanctioning only those methods that establish a vehicle's capability (as opposed to inability) to pass the Federal Test Procedure, this clearly was not the intent of Congress. When the above-quoted language is read in conjunction with the correlation requirement, 207(b)(iii), it is clear that Congress intended that the short test identify with reasonable accuracy vehicles which failed to meet the Federal Test Procedure so that the manufacturers could be required to repair them. Indeed, the committee report accompanying the Senate proposal to establish the Section 207(b) warranty, which was adopted by Congress, indicated that the purpose of the short tests was "to determine *whether or not* those [production and in-use] vehicles comply or continued to comply with standards for which they were certified". S. Rep. No. 91–1196, 91st Cong., 2nd Sess. 29. This result has been accomplished in the final regulations. However, it would be totally unreasonable to expect that a short test would be developed which would predict compliance with the emission standards. For one thing, no short test can measure cold start emissions, an important component of FTP results. A vehicle could be very clean when warm (on the short test) but still have excessive FTP emissions. The Agency believes that a short test which predicts failure of the FTP with a high level of confidence is adequate and complies with the statute. This issue is addressed more completely under the heading "Correlation".

2. Real World Demonstration. Comment: Many of the proposed short tests have not been tried in actual use. The Portland program will not evaluate either the Clayton or New York/New Jersey composite test. Without such real world experience it cannot be stated that the short tests are "available". Even the idle test has not been adequately demonstrated in the Portland program because of EPA's supervision. A prototype I/M lane is not sufficient to establish real world availability.

Response: The idle test is being used by Oregon and New Jersey for vehicle inspection programs. Arizona employs a steady state loaded mode procedure, using only the idle mode for compliance. (Data collected under the loaded modes is used for vehicle diagnostics.) Since these tests are actually in use, there is no question concerning their availability. EPA's Portland program utilized data collected by Oregon's Department of Environmental Quality as well as that gathered by EPA's contractor. EPA hired a separate contractor to perform more detailed tests and evaluate the effectiveness of the Portland I/M program. The Agency agrees with the comments of another manufacturer that stated the availability requirement is satisfied when the necessary equipment can be obtained and effectively used for its intended purpose. These conditions have been met.

3. Idle Test Recommended. Comment: In order to be fully effective, a short test must be available to garages in performing their repair work. This requirement is satisfied by the idle test only. Required equipment is available, reliable, and relatively inexpensive. This test is also the most informative to the service industry. All of the other short tests are both too sophisticated and expensive.

Response: Both the idle test (two versions) and a simplified loaded mode test are being adopted at this time. The states will be free to choose among them or even elect to use only one mode from a test. While the loaded test does require more equipment, its additional cost is not beyond the reach of many repair facilities. Further, a simple dynamometer for this testing will cost about $5,000; this is only slightly greater than the price of exhaust and ignition analyzers. Even in jurisdictions which adopt the loaded mode test, a dynamometer will not be required of every repair garage. The emission results from the I/M test, when combined with the mechanics knowledge and other tools, will enable proper repairs to be made. (Of course, with a dynamometer the mechanic would be able to verify that the vehicle was fixed.)

C. Good Engineering Practice

1. Performance in Actual Use. Comment: It has not been demonstrated that the proposed short test can be done with reasonable demands on the inspection personnel. A practical demonstration of the short test is required to establish that they are in accordance with good engineering practice. Further, the accuracy of any short test will decrease (from laboratory conditions) when put in actual use.

Response: As discussed above, both the idle and loaded mode tests have been used in actual inspection lanes. The ability of the personnel and equipment to perform these tests has been demonstrated. Idle test standards have been developed using data collected at the Portland I/M lane; loaded-mode standards were derived from tests by EPA's contractor; they were verified by checking against a limited number of loaded tests run at the I/M lane. In any event, the short test standards are conservative, espeically when applied to later model year vehicles with lower emissions. The conservative nature of the short tests will mitigate any problems arising from their implementation.

2. Variability. Comment: The variability of the short test is too great (approximately 15%) for purposes of warranty enforcement. This results from many uncontrolled variables such as preconditioning, idle RPM, fuel, altitude,

and ambient temperatures. All of these are controlled under the Federal Test Procedure.

Response: The short test standards were established by evaluating test data from EPA's Portland program. This data inherently includes test variability. The impact of these uncontrolled variables is not so great as to defeat the basic value of the short tests as evidenced by the high capture rate and low errors of commission. Since the standards established are not very stringent, the impact of any variability is reduced. Results from other test programs confirm this conclusion. See Technical Report, Light Duty Vehicle and Light Duty Truck Emission Performance Warranty; Short Tests and Standards, November 1979.

3. Short Test Structure. Comment: Good engineering practice requires that high emitting FTP modes be included in the short test. This includes the cold start portion as well as loaded operating modes. It is essential that any short test operate the emission control system as it would be operated during the FTP. Without these qualities, any short test cannot consistently predict FTP results and is not in accordance with good engineering practice.

Response: Any test meeting the requested requirements would not be "short". The practical considerations of running an I/M lane must be addressed. Taken literally, the commenter would require that the short test be very similar to the FTP and thus would not be at all suitable for inspection lane use. It is not believed that this is what Congress intended. A short test complies with the requirements of "good engineering practice" if it can detect high emitting vehicles. It is not required that the short test be equivalent to the FTP.

D. Correlation

1. Classical Correlation Required. Comment: "Correlation" implies that either test can be used as a measure of the effectiveness of the complete emission control system. One relationship must exist between the two tests such that the results of one will be capable of consistently and reliably predicting results of the other. Correlation is a function of the tests and not of the sample used to evaluate correlation.

The Clean Air Act requires that classical correlation exist between the short test and Federal Test Procedure. In interpreting Section 207(b), one must use the common meaning of the language. Further, it is improper to assume that one part of the paragraph is superfluous to another. Specifically, the third requirement "reasonably capable of being correlated" should not be construed to be redundant with the first requirement "availability to ascertain compliance." Both provisions must be given interpretations that will not make them redundant. To do otherwise is improper statutory construction. Finally, it is incorrect to assume that "correlation" is satisfied by identifying failed vehicles only.

Response: The Agency disagrees that Congress intended the short test to correlate in the classical statistical sense. For reasons addressed below, this is not possible. Certainly, Congress did not intend to draft legislation which could not be put into effect; some type of short test was intended. Section 207(b)(i) requires that a short test be available that can determine whether or not a vehicle complies with emission standards. Section 207(b)(iii), and not Section 207(b)(i), establishes the correlation requirements for the short test. If the language in 207(b)(i) were read to require strict, classical correlation, as some manufacturers have suggested, it would be inconsistent with Section 207(b)(iii) which requires only that the short test reasonably correlate to the certification test. The requirement for reasonable correlation was to insure that vehicle manufacturers would not be forced to repair significant numbers of conforming vehicles. A short test satisfies the requirements of Section 207(b) if it can identify a large part of the excess emission with a low error of commission. (That is, it does not incorrectly select conforming vehicles as failing.)

Due to the inherent shortcomings of any short test, it is only possible to identify failing vehicles with a high degree of certainty. None of the short tests investigated by the Agency can reliably predict compliance with emission standards. This results partially because short test cannot measure cold start emissions. There is no practical way to eliminate this deficiency. As has been addressed above, the Agency feels the adopted approach is reasonable.

Comment: No classical or contingency correlation exists for the proposed short tests and standards. It is impossible to extrapolate or project results from several data sets to get such correlation. (Several data sets were cited to illustrate this point.)

Response: The Agency agrees that classical and contingency table correlation are not possible in the traditional sense. The approach taken sets short test standards so that a vehicle failing those standards has a high probability of failing the certification test. More emphasis is placed on reducing errors of commission than on identifying vehicles which marginally exceed the certification standards. This approach was supported by the Ford Motor Company in its comments, during the reopened comment period. The data sets cited by this commenter show that short tests identify a substantial amount of the excess emissions for older vehicles. Vehicles tested at the end of the assembly line, and newer vehicles in general, do not have high emissions. It is not appropriate to use such data to evaluate the short tests. None of the data cited refutes the fact that a 1981 vehicle which exceeds the short test standards will have a high probability of exceeding its certification standard. As is discussed elsewhere, the Agency's approach regarding correlation is consistent with the language, legislative history and purpose of the Clean Air Act.

2. Reasonable Correlation. Comment: "Ideal" correlation would imply back-to-back Federal Test Procedures. Reasonable correlation would be less than ideal but considerably better than chance.

Response: The short tests and standards adopted comply with this comment.

Comment: Reasonable correlation does not exist as indicated by the California audit data on 1980 model light duty vehicles.

Response: Test results from vehicles just off the assembly line are not representative. With age and mileage one can expect components to fail and cause excessive emissions. It is this type of in-use failure which the short tests are designed to detect. Brand new vehicles would have very low failure rates and very few defects as compared to in-use vehicles that will be subject to short tests. Many NPRM commenters objected to the use of anything other than "real world" data to establish correlation; assembly line tests are not "real world."

3. Fundamental Relationship. Comment: A physical, technical relationship between the short test and FTP is required. Otherwise, any correlation obtained is fictitious. In order to comply with this requirement, the short test must incorporate modes with high correlation to the FTP. Of necessity, this would have to include a cold start and warm up. (Higher technology vehicles are expected to have increasingly larger proportions of their emissions come from these modes.) The idle test does not correlate because it misses many of the high emitting modes.

Response: The Agency rejects this interpretation. As with the previous assertions that classical correlation is required, this comment would make adoption of the short test impossible. It is sufficient that a vehicle which fails the short test have high probability of failing the FTP. To that extent, there is "a fundamental relationship" between the two tests. High short test emissions are a symptom of malperformance.

Comment: It is impossible to obtain classical correlation without a cold start test which in itself is impossible for inspection purposes.

Response: The Agency agrees with this comment and has adopted a functional definition of correlation; vehicles failing the short test will have a high probability of failing the full certification test.

4. FTP Problems. Comment: The Federal Test Procedure is extremely variable and does not correlate well with itself. In recognition of this fact, EPA allows retests on certification vehicles. Even a hot start FTP will not correlate with itself. Under these circumstances, it can be stated that no short test will ever correlate with the FTP.

Response: The limitations of FTP to FTP correlation establish a limit on the correlation that a short test can obtain. The ability of the short tests to identify high emitting vehicles satisfies the requirement of "reasonable correlation".

5. Short Test for Certification. Comment: If the short test works, then it should be used for certification to save expense.

Response: The short test is not equivalent to the FTP and serves an entirely different function. As adopted in the final rules, it is a diagnostic tool for accurately predicting the occurrence of high emissions. It will not, and need not, predict with certainty the precise FTP emission levels.

6. Future Technology Vehicles. Comment: Two significant changes in future passenger cars can be foreseen. First, under the parameter adjustment regulations, cars will be "tamperproof." Second, with increasingly stringent emission standards, more sophisticated electronic control systems will be installed. Also, these lower emitting vehicles will have a larger proportion of their total emissions coming from the cold start phase of the Federal Test Procedure. Most of these changes should make the establishment of correlation between the short test and FTP more difficult. Further, it is required that this correlation be established with vehicles to which the emission performance warranty will apply.

Response: This concern has been addressed in development of the short test emission standards. These standards were developed from the highest technology production vehicles for which adequate data was available, specifically 1975–77 passenger cars tested in EPA's Portland Program. Analysis of this data yields short test standards appropriate for 1981 light trucks and cars. Light trucks for 1981 and later will have similar emission controls to 1975–77 passenger cars. Future cars will be certified to lower emission levels with an expected decrease in short test emissions; consequently, the short test standards established in this rulemaking will be less stringent. As experience is gained, revised standards will be promulgated in future rulemaking actions. If it were required that short test standards be developed using the class of vehicles to which such standards would apply, the time required to do the requisite testing would significantly reduce the period of warranty coverage.

In the unlikely event that a manufacturer uses technology which has increased short test emissions, a specific alternate standard can be applied to such vehicles.

7. Contingency Tables. Comment: The contingency table approach is not acceptable because of the higher sensitivity of the correlation index to the emission standard. Further, the contingency table approach is not appropriate for correlating measurements. Finally, it is incapable of accurately predicting compliance with the FTP standards.

Response: The use of contingency table correlation indices has been deleted. In its place an absolute standard has been adopted. While this approach gives up some possible increase in correlation, it compensates by being very simple and by having an acceptable error of commission rate.

8. Data Base. Comment: Tampered vehicles with rich idle mixtures should be deleted from the data base. Such vehicles will not qualify for 207(b) emission performance warranty work, and should not be used to establish correlation. Inclusion of such a vehicle distorts the short test to FTP relationship, and makes the correlation appear better than it really is.

Response: The adopted standards have been developed to identify all types of malfunctioning vehicles, not just those which would qualify for 207(b) warranty repairs. This approach does not prejudice the manufacturers, since under the terms of the statute they will not normally be liable for repairs to tampered or maladjusted vehicles. Short tests and standards were developed in a manner as close to their actual use as possible—this required "real world" cars. Practical considerations would prohibit EPA from running an experiment using 2200 vehicles whose maintenance and operation would meet warranty requirements without any deviation.

9. FTP Errors of Commission. Comment: The FTP error of commission rate would be lower than the three to six percent claimed by EPA.

Response: No data or basis for this statement are cited. While for a very clean group of vehicles, such as certification test fleet, the error of commission rate may be lower, EPA still feels that, based on the analysis in the Technical Report, a three to six percent Ec rate for in-use vehicles is correct.

10. Errors of Omission. Comment: Vehicles which marginally fail the certification test are part of a distribution which would pass on the average. It is appropriate that the short test not fail them.

Response: The Agency does not share this view that it is only average emissions which are important. The Clean Air Act specifies that *each* vehicle shall comply with the emission standards for its useful life. It is only due to short test limitations that more errors of omission are not detected. Congress intended that vehicles exceeding their emission standard have a warranty remedy; no mention is made of average emissions.

11. Tampered Vehicles. Comment: The proposed short tests were successful in identifying a large portion of the excess emissions but only because tampered vehicles were included in the sample. These tampered vehicles will not qualify for warranty repairs. Also, in the future, cars will be less susceptible to tampering due to the parameter adjustment regulations.

Response: Of course tampered vehicles may not qualify for the emission performance warranty. Manufacturers are protected by the requirements of section 207(b) concerning the maintenance and operation of a vehicle in order for consumers to qualify for warranty repairs. The Act requires that the *tests*, and not vehicles be reasonably capable of being correlated, that they be available and be in accordance with good engineering practice. The fact that a vehicle is tampered does not destroy the relationship between the tests, whereas it may affect the manufacturer's liability. Inclusion of tampered vehicles reflects the real world. The only time that the presence of tampering shall be considered is in

determining whether a manufacturer is liable for the vehicle non-conformity.

E. Standards

1. Criteria. Comment: Short test standards should be optimized for cost-effectiveness or public acceptance.

Response: These criteria are not contained in the statute. Standards have been established to maximize the number of high emitting vehicles identified while keeping the errors of commission (false failures) low enough to satisfy the requirement of "reasonable correlation." However, the Agency has made revisions to simplify the standard setting process which should make them more acceptable and cost efficient.

2. Timing. Comment: It is not desirable to have new vehicles on the road and exempt from the emission performance warranty while standards for these vehicles are being established.

Response: Unlike the proposal, standards are being established prior to the new vehicles going on sale. These standards would be based on previous technology vehicles and may not be as stringent as ultimately possible. However, they will be available for the entire period of the warranty.

3. Standard Setting Procedure. Comment: It is desirable to establish standards by testing a large sample with the same distribution as the "real world". The use of prototype, assembly line or induced fault vehicles is not typical and should not be permitted. Any use of certification vehicles would result in disruption of the certification process and can not be tolerated. it is impossible to reproduce the real world situation by other than in-use motor vehicles. The standard setting process is expensive if 50 vehicles per group are required and with groups based on engine family criteria.

Response: Standards have been developed from the latest technology in-use vehicles for which data are available—1975–77 model year passenger cars tested in EPA's Portland program. These standards will apply to 1981 and later model year Fedeal vehicles which will be certified to slightly lower (i.e., more stringent) emission levels. This approach reduces the expense and complexity of setting standards and makes them available at the start of the model year for which they are effective. Revised standards will be promulgated based on later model year (higher technology) vehicles if needed. Any such standards will be proposed as a separate notice of proposed rulemaking with full opportunity for public comment.

4. Errors of Commission. Comment: Errors of commission are not desirable since they penalize the manufacturer unjustly and result in the inspection lane personnel being in the position of settling disputes. Further, any fixed level of errors of commission would be arbitrary and illegal.

Response: The Agency desagrees with the position that no errors of commission can be tolerated. The Congress clearly specified "reasonable" and not "absolute" correlation. Every effort has been made ins setting the standards to keep the error of commission rate as low as possible.

Comment: Setting short test standards with an average error of commission rate at 5% may have a serious adverse impact for some engine families.

Response: Optional short tests and short test standards are possible in instances where excessive errors of commission will occur. These situations will be handled on a case-by-case basis upon a manufacturer's request since such occurrences will depend on the type of emission control technology used.

Comment: A 5% error of commission rate is unacceptable. Even if the FTP gives such an error of commission rate it is still too high to be used for short tests. The standard should be raised to make the errors of commission almost nil.

Response: Short test standards have been selected to yield approximately the same level of errors of commission as if the certification test itself had been used. The Agency feels this is a reasonable approach and complies with the statutory requirements. It is totally unreasonable to expect that no errors of commission will occur. To achieve that result would require short test standards so high that they would not be effective, because many defective vehicles would pass the short test standard (including even some gross emitters), so that the short test would identify a very small portion of excess emissions. The Agency feels that the approach taken is a reasonable compromise between protecting the manufacturer from unnecessary warranty claims and giving the consumer protection for defective vehicles.

5. Vehicle Grouping. Comment: If the desired result is to identify "gross emitters" then a general vehicle grouping is possible, but a higher level of correlation is required. The NPRM was aimed at identifying marginal emission failures. Of course, any broad grouping tends to be biased. A limited number of groupings would aid in the operation of state inspection/maintenance programs. (Several manufacturers expressed a preference for engine/vehicle/technology groupings.)

Response: The Agency has adopted one broad group to cover all light duty vehicles; light trucks are categorized into a separate group. This eliminates the expense of establishing initial standards, and, as pointed out by the commenters, aids in the operation of inspection/maintenance programs. The increase in air quality resulting from a more complicated approach would have been marginal and would have involved significant added expense and administrative burden.

6. High Altitude. Comment: The short tests and standards should be voluntary for the 1981 model year at high altitude. The 1982 and 1983 short test standards should be somewhat more lenient at high altitude than for low altitude areas.

Response: There will be no approved short test for high altitude for the 1981 model year. Beginning in 1982, the same short tests and standards will apply both at low and high altitudes. EPA has analyzed data indicating that vehicles tested at high altitude using the approved short tests respond in approximately the same manner as those tested at the low altitude. (See Technical Report figure 8 for data collected in Denver.) Therefore the same standards can be applied. However, these high altitude standards will not take effect until high altitude certification standards are promulgated. (This is expected for the 1982 model year.) For light duty trucks the situation is somewhat more complicated. The short tests and standards will not take effect unless the high altitude standards (also expected for the 1982 model year) are below certain specified limits. These limits were established so that the high altitude light duty truck standards are of equivalent stringency to the 1975 through 1977 light duty vehicle standards at low altitude, upon which the short test standards were developed. (See Technical Report.)

7. Optional Standards. Comment: Short test standards with an average error of commission rate of 5% may prove to be too stringent for some particular models. For example, a small displacement non-catalyst light duty truck can be certified with an idle specification higher than that proposed for the emission performance warranty short test. Also, some types of emission control equipment are more effective at high speeds and vehicles equipped with those systems will be unfairly discriminated against by the short test. For example, pulse air systems are not as effective at idle as at higher speeds.

Response: The final regulations provide for such occurrences by

permitting a manufacturer to apply for optional short tests and standards. In such cases, the Administrator will set separate short tests and/or standards of equivalent stringency for appropriate vehicles.

F. Short Test

1. Recommendations. Comment: The adopted short test must have a high probability of passing conforming vehicles, identifying vehicles with broken emission components, and correctly determining maintenance and use histories. (Functional checks may be the best approach.) In order to minimize expense, there should be only one approved short test, otherwise aftermarket part manufacturers would have to design to each separately, passing the additional cost to purchasers. In order to be totally effective, the short test should be available to the service industry.

Response: Both versions of the idle test are totally available to the service industry and meet the concerns raised by the comment. While the loaded test requires a dynamometer, the expense should be within the capabilities of dealerships and larger repair garages. Even a mechanic without a dynamometer will be able to use information from the inspection test report to make proper repairs. Having multiple short tests will not burden the aftermarket part manufacturers. Designs will not have to be changed to accommodate the short tests; replacement parts should conform to the originals as at present. A vehicle operating as it was designed to (and as demonstrated during its emission certification) will pass the short tests.

Comment: The idle test is preferred for two main reasons. First, vehicles failed by additional modes (other than idle) tend to have higher error of commission rates. Second, the idle test would not require that automobile dealers purchase a chassis dynamometer to verify that warranty repairs have been done properly.

Response: The idle test has been adopted. The loaded two mode and two speed idle have also been approved because those procedures (or variations of them) are currently in use and those tests meet the statutory requirements. And, while the loaded mode and two speed idle procedures may not be necessary for 1980 and earlier passenger cars, these tests will be more effective with future vehicles as pointed out in the General Motors comment. A chassis dynamometer will not be necessary in order to perform or verify warranty repairs when the loaded two mode test is adopted by the jurisdiction. The test results can be used in conjunction with other diagnostic tools by the warranty outlet to make necessary corrections. Furthermore, chassis dynamometers are in the same general cost range ($5–10,000) as other pieces of sophisticated test equipment (exhaust gas analyzers, $3–4,000, and electronic engine analyzers, up to $20,000) used by some repair garages and dealerships.

Comment: Only one short test should be approved to prevent possible conflicts between short tests. For example, a vehicle could fail the two speed idle test and yet pass the two mode loaded procedure. Also, it is recommended that the two mode loaded test be approved since it is the most similar to the certification test procedure.

Response: Conflicts between the three approved short test procedures will not occur since a jurisdiction will select a single short test and vehicles will be tested accordingly.

Comment: The three proposed short tests will not be able to detect many malfunctions with 1981 and later light duty vehicles. This is especially true of the idle test. Under the circumstances the statutory requirements of Section 207(b) have not been met.

Response: The data cited by General Motors (during the reopened comment period) was generated on a prototype vehicle with induced malfunctions. These results indicate that the idle test will not be as effective on future vehicles as it is at present. However, the Agency does not share the view that the limited test data provided is conclusive in showing that the idle procedure is of no use. It should be noted that the test results were on a prototype vehicle with induced malfunctions. First, it is far from certain that all vehicles will employ the same control systems or even the same control technology. As manufacturers gain experience with the more stringent emission standards, changes will be made in the control systems. These changes will probably be in the direction of less sophisticated and less expensive systems which may be more susceptible to both malfunction and to detection by the idle test. Second, induced failures are not the same as real world experience. The components which will fail in actual use and their mode of failure cannot be predicted with absolute certainty. In any event, it can be safely stated that any future vehicle which fails the idle short test will be exceeding its certification emission standards so that the manufacturers' warranty liability is not increased by the inability of a given test procedure to detect all failure conditions. Finally, if the short tests adopted appear to be ineffective on future technology vehicles, EPA may consider revising such tests in a future rulemaking.

Comment: Instead of the emission short tests proposed, it is recommended that a procedure be developed to inspect critical emission control components.

Response: Such an approach would not meet the statutory requirements for an emission performance warranty short test. Also, this would be equating the 207(b) performance warranty with the 207(a) defect warranty, contrary to the intent of Congress in adopting two warranty provisions with distinct criteria.

2. Preconditioning. Comment: There is no data to substantiate the need for preconditioning on the idle test. It is essential that waiting time be minimized to reduce expense of the I/M programs. Further, the action of minimizing a waiting time would be more effective than preconditioning and obtaining accurate idle readings.

Response: No preconditioning is required for the straight idle test. A 2500 rpm mode can be elected by the implementing jurisdiction. The idle tests, and their associated standards, were developed from actual I/M lane data. As such, the variability attributed to preconditioning and waiting time have been reflected in the standards. Similar efforts were made on the loaded-mode test using the EPA emission testing contractor. Results of this work were verified by using a smaller number of loaded tests at the I/M lane.

3. Idle Test Procedures. Comment: The idle test should be run with all accessories off and with the engine fully warmed up. Engine condition can be evaluated by water temperature and open choke.

Response: These comments have been incorporated into the final regulations.

4. Idle RPM. Comment: Idle speed has some effect upon idle emissions. However, catalyst vehicles are not affected as much as prior technology and idle speed measurement takes time in an inspection lane.

Response: Except for specifying the high speed idle test condition, engine speed is not addressed in the final short test regulation. The States are free to adopt whatever requirements they wish.

5. Data Submissions. Comment: The extensive data submission requirements in the NPRM should be minimized.

Response: The entire data submission portion of the regulation has been deleted.

6. Variability. Comment: Altitude, ambient temperature, and fuel composition can affect the short test results.

Response: Availability of the emission performance warranty has been limited to low altitude areas until high altitude emission standards are promulgated. The effects of ambient temperature and fuel are less pronounced and are not deemed to be significant at the level of standards adopted.

Comment: Test conditions should be adequately defined to eliminate the possible influence on emission test results. Specifically, the vehicle should be warmed up, but not overheated, the ambient conditions should be specified, and the test procedures should be specified in more detail.

Response: Appropriate additions have been made to the final regulations. The suggestion concerning vehicle temperature has been incorporated in the regulations. Also, test conditions have been adequately defined to reduce, or eliminate, some of the sources of test variability mentioned in the comment. The restriction on ambient test condition has not been incorporated. When a warmed up and non-overheating vehicle is tested, ambient temperature is not a critical factor in determining short test emissions.

Comment: Differences observed between the I/M lane and the EPA's contractor when employing the same short test indicate that there is excessive variability. This excessive variability is an indication that the short tests do not comply with good engineering practice. Furthermore, EPA did not consider this variability in developing the short test standards.

Response: EPA acknowledges that some (short test) variability was noticed in the test reports from the two test stations. However, this variability could not be attributed solely to the short test. Vehicle variability undoubtedly contributed a great deal to the total, and there was no way to separate these components. Furthermore, this variability was considered in developing a short test standard by the fact that a large number of vehicles were analyzed. Results from over 2200 vehicles tested at the I/M lane were compared with scores from the official certification test at the contractor laboratory. This number of cars tested will eliminate the effect of test variability on the final results. Conclusions derived from the Portland data were tested against other EPA test results to verify their correctness. (This verification is found in Figure 8 of the Technical Report). As noted, the other data sets supported the original conclusions. In all, approximately 6,000 vehicles were analyzed to compare short test and certification test results. These results support the position taken in this rulemaking.

7. Garage Instruments. Comment: Garage instruments are not accurate enough to be used for purposes of the emission performance warranty.

Response: As revealed in the Technical Report, garage analyzers are accurate enough to be used for emission performance warranty short tests. High emitting vehicles are accurately identified with acceptable errors of commission. This is illustrated in Figure 8 of the Technical Report while idle test results from various programs (using garage analyzers) are compared.

8. Miscellaneous Comments. Comment: From reanalyzing the Portland data a lower percentage of excess emissions identified was observed than stated in EPA's short test report. There was no time to resolve this discrepancy.

Response: Similar calculations were rerun with essentially the same results. In any case, the difference in excess emissions identified is not significant (about 10%), so that the conclusions reached remain valid under both calculations of excess emissions.

Comment: EPA did not report results of its analysis of the California Air Resources Board data.

Response: This data was not used in development of the short test standards. Some preliminary calculations were made which would support much lower short test standards. However, due to the limited number of vehicles and the fact that the tests were performed under "laboratory" conditions, no final calculations employing this data were made. The fact that these results support lower standards does not mean that the current standards are invalid.

Comment: There is no requirement that states adopt the same short test standards as applied for 207(b) warranty work. In order to gain additional credit in their state implementation plan, states have an incentive to adopt more stringent standards. This would place the automobile dealer in a difficult position between only having to repair the car back to the 207(b) standards with a subsequently unhappy owner. EPA should take steps to insure that inappropriate state short tests and standards are not adopted.

Response: States are free to adopt whatever short tests and standards they deem appropriate. EPA reviews State Implementation Plans to see that certain performance criteria are met; the Agency has no authority to interfere with their decisions. However, it is extremely unlikely that states will adopt short test standards more stringent than those now adopted for the 207(b) emission performance warranty. The 207(b) standards are quite effective in identifying excess emissions, and more stringent standards would gain very little. Also, high failure rates without warranty protection would result in significant citizen dissatisfaction.

Comment: The proposed short test regulations would require local jurisdictions to have sophisticated and expensive test equipment. Also, the local jurisdiction would be put in the middle of disputes between the manufacturer and the vehicle owner.

Response: This comment came from a jurisdiction considering adoption of an I/M program. It is contrasted with comments submitted by vehicle manufacturers, both parties wanting to avoid being in the middle of disputes over warranty coverage. EPA does not expect that such three-way disputes will occur.

The emission performance warranty does not require action on the part of the state or local government in order to be effective. The State's responsibility will be only to pass or fail vehicles and to impose penalties or sanctions. The consumer is responsible for meeting the requirements. Since the manufacturer is liable to consumers under the warranty provisions, disputes over warranty claims will not involve local or state jurisdictions.

Environmental Protection Agency

May 12, 1980.

Theodore Souris, Esq.,
Bodman, Longley and Dahling, 35th Floor, 100 Renaissance Center, Detroit, Michigan.

Dear Mr. Souris: On December 21, 1979, you submitted a petition on behalf of the Motor Vehicle Manufacturers Association of the United States, Inc. (MVMA), requesting that the Environmental Protection Agency (EPA) repropose the Emission Performance Warranty Short Test regulations which were proposed initially on May 25, 1977 (42 FR 26742). The basis for your request was that several events had occurred during the two and one-half years since EPA first published the proposed short test regulations, all of which allegedly are significant to the proper establishment of an emissions short test program. You also claimed in a subsequent letter dated January 16, 1980, that EPA's technical report on the short test standards [1] that were to be developed from new data supported your previous contention that the regulations should be reproposed.

We do not believe we were legally required to reopen the comment period, since the Agency's then current thinking on the approach that should be taken in the final rules was a direct outgrowth of the comments received on the various approaches proposed in the May 1977 Notice of Proposed Rulemaking (NPRM). Nevertheless, EPA

[1] "Light Duty Vehicle and Light Duty Truck Emission Performance Warranty: Short Tests and Standards," December 1979 (IMS-009/ST-1) [hereinafter "Technical Report"].

reopened the comment period for 30 days to allow interested persons to consider and to submit comments on any new information not previously available for comment, in order to allow the public to participate to the maximum extent feasible and to address the concerns raised in MVMA's petition. The Federal Register notice announcing the reopening of the comment period until March 3, 1980 (45 FR 6980 (January 31, 1980)), included a summary of the approaches proposed in the NPRM and a summary of EPA's current thinking on how the regulations should be finalized. The summaries were intended to enable interested persons to focus their comments on any impacts from the specific information not previously available for comment, and to provide a regulatory framework to which the comments could be directed.

Prior to publication of the Federal Register notice on January 31, 1980, EPA notified by mailgram several manufacturers' representatives, including MVMA and yourself, that the comment period was being reopened for submission of comments on new data, EPA analyses and conclusions from the data, and that all new information would be placed in the appropriate public docket. On January 24, 1980, you sent a reply mailgram objecting to the adequacy of the 30 day comment period, and alleging that much of the background information essential to making informed comment was not publicly available. Our February 13, 1980, mailgram to you pointed out that all information essential to informed evaluation and comment on data, analyses and conclusions generated since the close of the original comment period had been placed in the public docket prior to the start of the comment period. In addition, we reminded you that EPA previously had sent copies of this essential information to MVMA and/or individual member companies upon request throughout 1979, and that additional background information and assistance on clarifying information had been or would be provided by EPA's technical staff.

On February 11, 1980, you submitted a Supplement to the MVMA Petition for Reproposal, alleging the inadequacy of the 30 day extension to the original five and one-half month comment period for consideration of the "substantial changes" you claimed EPA has made in the proposed data base, short test standards, and correlation methodology. In the Supplement, you cited 54 pieces of information that you claimed were essential to making informed comment. On March 3, 1980, Mr. Harry B. Weaver of MVMA submitted extensive written comments and supplementary computer analyses critiquing the data and analyses EPA had used as a basis for emphasizing the particular regulatory approach then being considered.

Upon consideration of the objections you raised in support of your request for reproposal of the proposed short test regulations, and upon examination of the comments MVMA and others submitted to the public docket, I have decided that reproposal is totally unwarranted at this time, and, therefore, I am issuing the final regulations concurrently with this letter.

All interested persons have been provided with ample opportunity to consider and comment on all aspects of the proposed short test regulations. The entire field of possible solutions was set out in the NPRM, with all subjects and issues before the Agency described. Comments were requested on a broad base of issues involved in establishing the short tests and short test standards, including the appropriateness of the proposed short tests, the data base for setting standards and methods for determining standards. All aspects of the rule being adopted were the subject of detailed and exhaustive comment during the five and one-half month comment period initially provided.[2] The views expressed in those comments were the primary force in EPA's decision to eliminate the complex regulatory approach discussed in the NPRM and to adopt a far simpler and less costly approach for the 1981 model year. In fact, that the Agency chose a simpler approach in response to concerns raised in comments indicates that the public participation process has functioned properly and effectively.

Since the final rules were developed in such a way as to address the concerns raised in the initial comments, and because the final rules present no new subjects or issues, reproposal was unnecessary. Moreover, to the extent that information recently made available and EPA's analysis of that information would change any comments previously submitted, the recent 30 day extension for additional comment provided an adequate opportunity for submission of those views in the context of the regulatory approach outlined in the Federal Register notice announcing the reopening of the comment period.

I am convinced of the adequacy of the 30 day extension for MVMA, its member companies and other interested parties to address any new data, information or analyses, and the impact of these items on the NPRM. MVMA raised in its petition several issues that auto manufacturers and others had addressed in previous comments on the NPRM. Indeed, many of MVMA's current objections apply to the more conservative and less burdensome approach adopted by EPA as a result of previous comments submitted by MVMA member companies and others. It is apparent from the extensive analyses which MVMA performed on several sets of data and the issues addressed in its recently submitted comments, that a reasonable opportunity for presentation of MVMA's views on the final plan has been afforded. Moreover, MVMA has not specified what would be accomplished by additional analyses of the data EPA has relied on, or how reproposing the regulations would allow MVMA to raise new or different criticisms. Therefore, I believe that further provision for notice and comment is not required and would merely delay implementation of the short test regulations, and ultimately, the performance warranty regulations.

I also question the reasons for MVMA's persistence in requesting reproposal, since many of the objections raised are with regard to modifications designed to reduce the burden of these regulations on auto manufacturers by limiting their potential exposure to warranty claims. Ample protection for manufacturers has been built into the statute and the regulations. As discussed in the attached memorandum,[3] I do not deem the issues raised in the MVMA Petition and Supplement sufficient to prevent me from making the statutory findings necessary to establish the short tests for application to 1981 and later model year vehicles. Therefore, MVMA's contention that I must delay establishing the short tests is unwarranted and contrary to Congress' intention to provide a mechanism for implementation of the vehicle performance warranty.

The enclosed memorandum contains responses to each of the issues raised in support of MVMA's request for reproposal, and sets out in more detail the basis for my denial.

Sincerely yours,

Douglas M. Costle.

[2] Three workshops also were sponsored by EPA during the original comment period for discussion of short test and warranty issues with affected parties. MVMA member companies participated in these workshops.

Memorandum in Support of Denial by the U.S. Environmental Protection Agency of Petition for Reproposal Submitted on Behalf of the Motor Vehicle Manufacturers Association re: Notice of Proposed Rulemaking on Short Test Establishment

On May 25, 1977, the Environmental Protection Agency (EPA) published a Notice of Proposed Rulemaking (NPRM) pursuant to section 207(b) of the Clean Air Act, as amended ("Act"), 42 U.S.C. 7541(b), to establish testing methods and procedures for ascertaining whether vehicles in actual use comply with emissions standards. [1] As explained in the NPRM, establishing such "short tests" is necessary for implementation of the section 207(b) vehicle performance warranty, which is the subject of a separate rulemaking.

On December 21, 1979, the Motor Vehicle Manufacturers Association (MVMA) submitted a petition for reproposal [2] of the proposed short test regulations. After EPA reopened the comment period for an additional 30 days to allow interested parties to comment on the impact of new information EPA has relied on to develop the final rules, MVMA submitted a Supplement to the Petition,[3]

[3] Memorandum in Support of Denial by the United States Environmental Protection Agency of Petition for Reproposal Submitted on Behalf of The Motor Vehicle Manufacturers Association Re: Notice of Proposed Rulemaking on Short Test Establishment."

[1] 42 FR 26742 (May 25, 1977).

[2] Letter from Theodore Souris to Douglas M. Costle, December 21, 1979, and attached *Motor Vehicle Manufacturers Association's* (MVMA's) *Petition for Reproposal* (hereinafter "Petition").

[3] Letter from Theodore Souris to Douglas M. Costle, February 11, 1980, and attached *Motor Vehicle Manufacturers Association's Supplement to Petition for Reproposal* (hereinafter "Supplement").

in which MVMA claimed that the extension to the comment period was inadequate to allow informed comment on the changes to the NPRM contemplated by EPA.

This memorandum sets out the basis for the Administrator's denial of MVMA's request for reproposal of the short test regulations. Part I of this memorandum explains why reproposal is not necessary and addresses the arguments raised in MVMA's Petition. Part II addresses the arguments raised in the Supplement, and explains why the recent extension to the comment period for the proposed rules provided adequate opportunity for interested parties to comment on any new data or information which EPA has used in developing the final rules and which was unavailable during the initial comment period.

I. Reproposal Is Not Necessary Since Adequate Notice Was Provided in NPRM

MVMA alleges in its petition that significant changes have occurred since the conclusion of the public comment period for the NPRM published in May 1977, which, individually and collectively, warrant reproposal of the regulations. MVMA contends that, although EPA presumably has considered changes in emission control equipment and new information, its analyses and conclusions have not been publicly disclosed and interested parties neither know what change may be contemplated in the NPRM nor have they been accorded an opportunity to comment on EPA's analyses and conclusions. MVMA cites as the most important of the events warranting reproposal the following: (1) The generation of new data and EPA analyses of the data; (2) significant improvements in emission control system technology; (3) EPA's failure to gather or publish any data on the applicability of the short test regulations to light duty trucks or diesel powered light duty vehicles; (4) EPA's failure to consider recent test data from current model year production of motor vehicles built for use in California; (5) EPA's change in the number and character of short tests being considered; and (6) EPA's adoption or proposal of other regulations.[4]

MVMA also contends that the changes EPA has made in the proposed short test regulations were not in response to public comment, but apparently were the result of EPA analysis of data not previously available for comment and of decisions within EPA to modify the methodology to be used in establishing "reasonable correlation."[5] MVMA alleges that, for these reasons, the changes do not follow logically from the NPRM, nor are they of the type intended to occur through the public participation process under the Administration Procedure Act. MVMA concludes that they require and deserve the complete study and analysis that can only be assured by complete reproposal of the regulations.[6]

MVMA's conclusion that it is essential for EPA to repropose the regulations in order to fulfill the purpose of the statutorily mandated notice and comment procedure lacks any factual or legal support. The "new developments" which MVMA claims to warrant reproposal involve issues or information that the Agency presented in the NPRM, that were considered as a result of public participation in the rulemaking process, or that are not relevant to this rulemaking. It is apparent from the following comparison of the subjects and issues presented in the NPRM with those addressed in the final rule that the final rule is well within the scope of the notice provided in the NPRM. All interested parties were fairly apprised of the subjects and issues before the Agency. Therefore, even if the final rules differ substantially from the proposal, the Agency was not required to subject the proposal to further public scrutiny, i.e., additional notice and opportunity for comment, before taking final action. *See Int'l Harvester Corp. v. Ruckelshaus,* 478 F.2d 615, 632 n.51 (D.C. Cir. 1973); *South Terminal Corp. v. EPA,* 504 F.2d 646, 659 (1st Cir. 1974).

The changes to the NPRM also were the logical outgrowth of the notice and comment process because they were made primarily to address concerns raised during the original 5½ month comment period, while remaining within the framework of the NPRM. Criticisms of the proposed test methods and procedures, including the sophisticated and expensive nature of several of the proposed tests, the failure of most of the proposed data sources to reflect real world conditions and the lack of a sufficiently large vehicle test group for selecting short test standards, had a major impact on the development of the final rule. The Administrative Procedure Act, 5 U.S.C. 553(b) ("APA"), does not require precise notice of each aspect of regulations eventually adopted, since this would result in repeated and essentially unlimited rounds of notice and opportunity for comment as the Agency modified the regulation to address public comments received. *See, e.g., Cal. Citizens Band Ass'n v. U.S.,* 375 F.2d 43 (9th Cir. 1967). Since the final rule is the "logical outgrowth" of the NPRM and public comments considered, additional notice and comment was unnecessary. *See, e.g., Nat'l Constructors Ass'n v. Marshall,* 581 F.2d 960, 970–71 (D.C. Cir. 1978). (The "logical outgrowth" test was developed under the APA to determine to what extent proposals on which public comments have been received may be altered without allowing further public comment. *Id.* at 971.)

One factor to be considered in whether to repropose is whether the regulated parties would suffer substantial detriment as a result of the alleged failure to give adequate notice. *See National Helium Corp. v. EPA,* 569 F.2d 1137 (3rd Cir. 1977). Here, EPA's modifications worked to reduce the potential burden upon the vehicle manufacturers subject to the Act's warranty provisions. In contrast, courts have upheld final regulations which embody more severe requirements upon the regulated parties than specifically provided for in the proposed rules. *See, e.g., American Iron and Steel Institute v. EPA,* 568 F.2d 284 (3rd Cir. 1977) (where the court found that persons should have been aware from the discussion in EPA's proposal that the Agency might adopt more stringent treatment technologies than embodied in the proposal).

Even assuming that the notice contained in the NPRM was inadequate to apprise interested parties of the subjects and issues before the Agency, the recent extension to the comment period afforded interested parties a reasonable opportunity to participate in the rulemaking process. *See South Terminal Corp. v. EPA,* 504 F.2d at 656–59; *Foster v. Consumer Product Safety Commission,* 559 F.2d 774, 787–88 (D.C. Cir. 1977). The notice of extension not only specified the new data and analyses for which comments were being invited; it also provided an explanation of the ways in which EPA was planning to incorporate the results of that information into the final rule. This notice, along with the 30 days provided for submission of comments, provided interested parties with a "fair opportunity to present their views on the contents of the final plan." *BASF Wyandotte Corp. v. Costle,* 598 F.2d 636, 642 (1st Cir. 1979).

As discussed below, the adequacy of the 30 day extension was made apparent by MVMA's ability to repeat EPA's analysis of the new data it has relied on and to conduct analyses of

[4] MVMA Petition, 5–19.

[5] MVMA Supplement, 35.

[6] *Id.*, 38.

several other sets of data not relied on by EPA.[7] Although MVMA claimed that it did not have sufficient time within which to submit complete and informed comments on the new information, it was unable to specify the nature of the comments or criticisms it would raise. In addition, EPA had provided MVMA and several of its member companies with information and assistance well in advance of the reopening of the comment period, so that they were familiar with both the data and the methods EPA used to formulate a final rule. Since MVMA had, in effect, much more than 30 days in which to consider the new information, as well as 5½ months in which to commment on the underlying issues presented by the NPRM, EPA believes that it has provided more than adequate opportunity for comment in this rulemaking.

A. Regulatory and Statutory Scheme

On May 25, 1977, EPA published an NPRM dealing with the establishment of test methods and procedures for ascertaining whether a vehicle complies with emission standards under section 207(b) of the Act. As explained in the NPRM, establishing such methods and procedures ("short tests"), to be used in conjunction with state or local Inspection/Maintenance (I/M) programs, is just one aspect of the section 207(b) warranty scheme. A separate rulemaking is required to establish a warranty under which vehicle owners whose vehicles fail to demonstrate compliance with emission standards in such a short test (and, as a result, are subject to sanctions) may have their vehicles repaired free of charge by the manufacturer, provided the owners properly operated and maintained the vehicles. The warranty regulations were proposed on May 25, 1977,[8] and reproposed on April 20, 1979.[9]

Section 207(b)(1) requires the Administrator to establish the short test "methods and procedures" by regulation if he determines that: (1) Such testing methods are available, (2) such methods are in accordance with good engineering practice and (3) they are reasonably capable of being correlated with the Federal Test Procedure (FTP). Section 207(b)(2) requires the performance warranty regulations to be prescribed at such time as the Administrator determines that inspection facilities or equipment are available to carry out the testing methods established by the short test regulations. The NRPM described the basic scheme for determining whether a vehicle complies with emission standards for purposes of section 207(b) warranty coverage: short tests determined to meet the statutory criteria could be adopted through I/M programs, and compliance with short test standards ("cutpoints"), which would be established either annually or on an as-needed basis, would determine whether a vehicle passes or fails the short test. Failure of the short test would trigger a manufacturer's warranty liability if the vehicle owner were subject to penalties or sanctions under the I/M program. Thus, the short test regulations merely provide the foundation for state or local I/M programs to determine whether a vehicle complies with emission standards. Whether a vehicle manufacturer is liable for repair of a noncomplying vehicle is the subject of separate criteria under the warranty regulations.

The basic scheme for determining whether a vehicle complies with emission standards for purposes of section 207(b) coverage has remained intact, i.e., vehicle non-compliance with short test standards (cutpoints), as administered through I/M programs, triggers the coverage of the warranty regulations. What remains at issue, and what MVMA has objected to, are the components of the three statutory determinations to be made by the Administrator in establishing the short tests and standards. These components, as set out below, were described in the NPRM, subjected to comments and criticism, and modified accordingly.

B. Subjects and Issues Treated in the Notice of Proposed Rulemaking

1. Short Tests. EPA proposed three categories of short tests as being suitable for use, either in total or in part, in inspection programs, and which were deemed to meet the statutory criteria of availability, reasonable correlatability with the FTP and reflecting good engineering practice. The idle test, with several procedural variations thereof, was described as one proposed test method. Although the test's inability to measure NO_x emissions was noted, it was pointed out that the idle test was the predominant procedure used in existing and planned state I/M programs. The second category of test methods, the steady state modal tests, was described as measuring HC, CO and NO_x emissions while a vehicle is driven on a dynamometer at two different speeds and idle. Two specific loaded tests were cited as being within this category—the Federal 3 Mode and Clayton Key Mode—and the procedural variation between them was attributed to the severity of the load simulated. The third category, transient tests, was cited as being the only category for which no field data was available (no state was using or planning to use such a test), and requiring greater investment in resources than the idle or steady state modal tests. The idle and steady state tests had been used in state I/M programs, although use of the steady state tests demanded more equipment, manpower and time than the idle tests.

2. Data Sources. The NPRM set out five sources of data to be used in making the statutorily prescribed determinations. Four sets of data from a total of approximately 500 1973–1975 model year vehicles, tested under laboratory conditions, were described as forming the basis for EPA's proposal that each of the five proposed short tests met the statutory requirements of availability, correlation and good engineering practice. The fifth source of data was a program planned to generate additional data on correlatability. Approximately 2400 vehicles (1975/76 model year) would be tested in Portland, Oregon's I/M program. The vehicles tested in this "Portland Study" (Element I) would be drawn from an in-use fleet rather than from assembly-line or certification vehicle fleets, making the test data more representative of real world conditions. Each vehicle was tested under the FTP and under each of the five proposed short tests to determine the extent of correlatability between the two at various cutpoint levels. The test program, which ultimately derived data from 2207 1975–77 model year vehicles, was completed in April 1979.[10]

3. Methods of Treating Data To Determine Correlatability. Although the NPRM described three techniques for determining whether the short tests and procedures could be "reasonably correlated" to the FTP, the Agency proposed adoption of the approach using a "contingency table". This

[7] *See* discussion in Part II of this memorandum; MVMA's Response to the Extension of the Comment Period for the Emission Control Systems Performance Warranty Regulations—Short Test Establishment, February 29, 1980 (hereinafter "MVMA Comments").

[8] 42 FR 26742 (1977).

[9] 44 FR 23784 (1979). The warranty regulations were reproposed because the 1977 amendments to the Act changed the length and character of the section 207(b) warranty; however, the short test provision was not affected by the amendments, and EPA notified the public in 1977 that reproposal of the short test NRPM was not anticipated. *See* Notice of Public Workshops, 42 FR 43412 (August 29, 1977).

[10] Element 1 of the EPA Portland Study, contained in computer files along with other in-use data EPA used to support the results of the Portland data, is located in EPA's Ann Arbor, MI, laboratory. Element 1 is the first of three elements comprising the Portland Study, and is the only element used in developing the short test regulations.

method was deemed sufficient for determining correlatability because it could be used to determine if the short tests were capable of reliably and consistently predicting whether a vehicle would pass or fail the FTP. How reasonable the correlation would be was described as being dependent upon the ratio of incorrect to correct predictions. The number of incorrect predictions would in turn be determined by the extent of errors of commission (short test incorrectly predicts FTP failure) and errors of omission (short test incorrectly predicting FTP passed). It was pointed out that errors of commission (Ec) could be reduced to any desired level by reducing the severity of the cutpoints, thereby reducing the cost incurred by the manufacturer in repairing those vehicles that comply with emission standards. Since doing so would necessarily increase the errors of omission, the incremental air quality improvement from fine tuning such vehicles would be foregone.

4. Development of Short Test Standards. The three major aspects to be addressed in setting cutpoints to be applied in conjunction with the short tests were: (i) The methodology to be applied to the test data for selecting the cutpoint levels; (ii) the numbers and types of vehicles to be tested (groups) to generate test data; and (iii) how often to test vehicles and set new cutpoints.

The Agency proposed that cutpoints be established each year by testing privately owned production vehicles and/or assembly line vehicles during the first nine months of each model year and applying the prescribed methodology to the test data. A vehicle group would be selected on the basis of significant differences in production vehicles' engine/size/emission control technology combinations, and the number tested in each group would be large enough to satisfy statistical requirements for sample size. The methodology to be applied to this test data was to be derived from one of five approaches. The simplest approach described was to set the short test cutpoints at a level corresponding to a 5 percent Ec commission rate within each group. This "easy to implement" approach was ultimately chosen.

The NPRM noted that the Agency might provide short test cutpoints only on an as-needed basis, since further testing might show that setting cutpoints annually for as many groups of vehicles as anticipated might not be necessary. Also, the NPRM indicated that the effects of real world variables shown by the Portland data would be incorporated into the cutpoints.

5. Scope of Regulations. The Agency proposed that light-duty trucks (LDT's) be subject to the light-duty vehicle (LDV) short tests and methodology for setting cutpoints, although the actual cutpoints for LDT's might differ. The basis for this proposed approach was the similarity in engineering design and usage between LDT's and LDV's.

Although the proposed short tests were expected to function effectively as predictors of the FTP emissions of all future technology vehicles, the NPRM proposed that in the event the emissions of a new technology vehicle could not be measured effectively by the proposed tests, one or more new short tests would be implemented to apply to those vehicles.

C. Development of the Final Rule. A majority of the approximately 100 comments submitted in response to the NPRM were opposed to the proposed regulations.[11] A recurring criticism of the NPRM was the cost and complexity of the proposed tests and standard setting scheme. Many of the proposed short tests were criticized as being too sophisticated and expensive and were claimed to be unavailable since they had not been tried in-use (only the idle and loaded mode tests actually have been used in inspection lanes). The automotive industry raised arguments similar to MVMA's recent comments on the extent of correlation required between the short tests and the FTP and the method of determining correlation. Objections to the annual standard-setting scheme covered all aspects of the scheme of testing/analyzing data/cutpoint selection for various vehicle groups.

The proposed testing of numerous vehicle groups for establishing different cutpoints was criticized as being expensive if sufficiently large samples were to be tested. Whereas the NPRM was aimed at identifying marginal FTP failures, it was pointed out by one auto manufacturer that a more general vehicle grouping would be possible (and would aid the operation of state I/M programs) if identification of "gross emitters" rather than marginal failures was the desired goal.[12] The use of data from assembly line or prototype vehicles was criticized as being unrepresentative of real world conditions; it was urged that only in-use vehicles be used as the data source. Also, the timing of the testing (during each model year) was claimed to be undesirable since new vehicles exempt from the performance warranty would be on the road. The use of errors of commission in determining short test correlation and in setting cutpoint levels was criticized as unjustly penalizing manufacturers.

Upon considering these and other objections, the Agency modified the proposed rule to emphasize detection of high emitting vehicles rather than marginally noncomplying vehicles. By doing so, much of the expense involved in detecting those incremental emissions through complex tests and standard-setting procedures could be eliminated. Each revision to the NPRM is discussed below, along with the reasons for rejection of MVMA's arguments for reproposal.

1. Data sources. MVMA claimed in its petition that reproposal is warranted because, among other items, EPA had not yet published for public comment the data developed during the study it had conducted in Portland [13] or other data that "may be relevant to short tests".[14] MVMA also claimed that recent test data from current model year production of motor vehicles built for use in California should be considered by EPA before its final regulations are promulgated.[15] These arguments do not warrant reproposal of the regulations.

EPA recognized the importance of real world effects on the appropriateness of the selected short tests and cutpoints, and pointed out in the NPRM that the effects shown by the Portland Study, the only test program that would generate data from in-use vehicles in an actual I/M lane, would be factored into the final rules. Commenters, including members of the MVMA, still objected to the failure of the proposal to reflect real world variables. Manufacturers insisted that data derived from "real world" conditions serve as the basis for setting short tests and establishing correlation, rather than the laboratory data cited in the NPRM.[16]

As a result of these comments, the Agency decided that rather than relying at the outset on the very limited laboratory data from approximately 500 autos and factoring in the results of the

[11] A summary and analysis of all comments submitted on the proposed rule is published concurrently with the final rule.

[12] "Comments submitted by General Motors Corporation on the Notice of Proposed Rulemaking on section 207(b) Emission Control System Warranty Regulations—Short Test Establishment", November 7, 1977, (hereinafter "GM 1977 Comments"), at 78–80.

[13] MVMA Petition, 6.

[14] *Id.*, 7.

[15] *Id.*, 12.

[16] For example, General Motors commented that the short tests used to evaluate "reasonable correlation" must be conducted under "real world" conditions, since real world influences would result in correlation less than that obtained under laboratory conditions. GM 1977 Comments, 6.

2400 vehicle Portland study to determine the correlation of the short tests, as proposed, it made more sense in view of the objections to use the Portland data as a base for determining correlation and short test standards.

Since all relevant aspects of the Portland Study had been described in the NPRM (i.e., testing of 2400 1975/76 model year vehicles under FTP and all proposed short tests) and an opportunity to comment was provided, the Agency felt it unnecessary to present for further comment the actual results obtained. Nevertheless, in view of MVMA's objection that EPA had not made available for public comment all data from the Portland Study and other relevant test data, EPA provided 30 additional days[17] for submission of comments on EPA's reliance on the Portland data in making the statutory determinations. Other data, used only to support the conclusions drawn from the Portland data, also was made available for comment.[18]

MVMA claims that EPA must consider all data that may be relevant to short tests, such as the test results of other states' I/M programs and the experimental I/M test investigations soon to be commenced by several states.[19] However, EPA did analyze in-use vehicle data from eight cities, and this data supported the conclusions reached from the results of the Portland Study. MVMA has given no indication why EPA analysis of additional in-use data is necessary, in light of the volume of in-use data already analyzed; nor has it shown why the particular data cited would be anything more than cumulative.

EPA also need not analyze California new vehicle data and conduct further correlation studies on current model year motor vehicles, as asserted by MVMA.[20] EPA has found that the statutory criteria have been met by its analysis of in-use data, used primarily as a means to address concerns raised previously by MVMA member companies and others that the data used by EPA in making the statutory determinations would not reflect real world influences. The California data cited by MVMA is derived from new vehicles with no, or very little, accumulated mileage, and therefore would not be representative of the in-use vehicles which would be tested in I/M programs, nor would the results reflect real world effects.[21]

2. Short Tests. MVMA asserted in its petition that if EPA has reduced the number or changed the character, of tests being considered, affected parties should be accorded an opportunity to submit more thorough and comprehensive analysis in light of intervening events which have occurred since the 1977 NPRM.[22] However, further analysis of the short tests is unnecessary in view of the fact that, in responding to criticisms of several of the more complex tests, EPA traded off some of the accuracy inherent in those tests for the additional availability of the simpler tests being adopted.

Commenters had objected to the complexity and expense involved in several of the proposed short tests, as well as to the lack of in-use experience with these tests. As a result, EPA considered establishing only those tests that would meet both the requirements of the Act and the needs of parties that would be administering the tests. Those tests given further consideration, and ultimately adopted, all fell within the descriptions outlined in the NPRM. The idle tests, one meeting the "classical" idle test description (measuring HC and CO emissions while engine idles) and the other, a two-speed idle test, meeting the description of the procedural variations of the idle test, were pursued due to their widespread availability. A simpler steady state modal test using two modes, replaced the three-mode tests proposed. The transient tests were eliminated altogether largely because their complexity and expense would discourage States from adopting them, and because their lack of in-use demonstration prevented adequate evaluation.

Although the original 5½ month comment period should have been sufficient time for affected parties to consider and comment on the benefits and disadvantages of idle, steady state and transient tests, the recent extension to the comment period provided additional opportunity for comment on the specific tests being considered by the Agency.

3. Methods of Treating Data. MVMA claimed in its Supplement that EPA's correlation methodology does not resemble that proposed in the NPRM because: (1) The contingency table analysis is replaced by an estimate of the errors of commission in the FTP and short tests with approximately the same Ec rate would be acceptable; (2) the NPRM focused on comparisons of results on the FTP and short tests for individual vehicles, whereas now the comparison is over a fleet of vehicles; (3) the calculation of errors of omission has been abandoned; and (4) NO_x emissions are not being considered in the determination of reasonable correlation. Therefore, MVMA asserts, reproposal is necessary for adequate analysis and comment.[23] MVMA has overstated the modifications made to the methodology. EPA has introduced no new factors into its methodology, and has merely given greater weight to those factors that would reduce manufacturers' exposure to unnecessary warranty liability.

In line with EPA's efforts to reduce the cost and complexity of the proposed rules by concentrating only on detection of vehicles with excessively high emissions, EPA developed a final approach to correlation that would trade off some incremental air quality benefits in exchange for a reduction in potential repair costs to manufacturers and consumers. The methodology described in the NPRM for determining "reasonable correlation" was in fact used. EPA balanced the potential consequences of incorrect predictions and correct predictions, and the costs incurred by errors of commissions and omission. Greater weight was given to the potential costs to manufacturers if short tests and standards designed to detect marginally failing (FTP) vehicles incorrectly failed substantial numbers of vehicles. Less weight was accorded to the incremental emissions not detected by short tests and standards designed to fail only gross emitters.

The resulting methodology was one which would require a short test to: (1) Identify a substantial portion of excess emissions (emissions above the Federal standards) and (2) have low errors of commission, i.e., incorrectly fail vehicles actually in compliance in a low percentage of tests conducted. This would allow detection of gross emitters, thereby retaining most of the air quality benefits, while preventing most unnecessary repairs. EPA accomplished this goal by reducing the severity of the short test cutpoints to a level corresponding to a 5 percent error of commission rate, which was one of the options set out in the NPRM. By monitoring the short test's ability to identify with reasonable accuracy vehicles which would fail the FTP, the extent of incorrect failures (errors of commission) which would affect

[17] As discussed in Part II of this memorandum, MVMA had much more than 30 days in which to examine the data and analyses generated since the close of the original comment period, since EPA had provided copies of the information to MVMA and/or its member companies during 1979.

[18] Eight city composite study (data from 3700 vehicles), restorative maintenance data, and emission factors data.

[19] MVMA Petition, 7.

[20] *Id.*, 12.

[21] *See infra* note 40.

[22] MVMA Petition, 13.

[23] MVMA Supplement, 22–26.

warranty liability by requiring unnecessary repairs, could be limited to the desired level. Therefore, EPA's calculation of the errors of commission of the FTP (approximately 5 percent) and positing that short tests with a similar rate of incorrect failures are reasonably correlated, is totally consistent with the purpose of the proposed methodology, i.e., to require manufacturers to repair noncomplying vehicles.

Moreover, EPA's selecting the level of Ec demonstrated by the FTP (approximately 5% as stated in the NPRM's Option 1) as a basis for correlating the short tests and standards is the direct result of comments submitted by MVMA member companies. For example, General Motors had suggested that "ideal" correlation is the degree of correlation between back-to-back FTP tests.[24] Therefore, the Agency has applied an Ec rate corresponding to the FTP's Ec rate in defining correlation and selecting short test standards.

MVMA claimed that EPA's classifying all vehicles as a single group is the opposite of what was proposed in the NPRM, and that this possibility was not discussed in the NPRM.[25] This is not true, since the NPRM explicity anticipated vehicle grouping on a different basis than that proposed. The NPRM did not focus on comparing FTP and short test results for individual vehicles, as asserted by MVMA,[26] but rather for vehicle "groups" which, as indicated in the NPRM, possibly would be made broader than the proposed engine/size/technology categories. EPA's evaluation of fleet data is a result of its establishing the vehicle test group on the basis of "latest available in-use data", i.e., the Portland test fleet. In fact, this use of the broader grouping of vehicles in a "gross emitter" scheme also was suggested by one MVMA member company in its comments on the NPRM.[27]

MVMA's conclusion that EPA's interpretation of "reasonable correlation" has changed since it is now based on a comparison of test results over a fleet of vehicles rather than individual vehicles, also is erroneous.[28] "Reasonable correlation" must be established between the FTP and the short tests, not between vehicles. Regardless of the specificity of vehicle grouping, reasonable correlation may be established between the tests to fulfill EPA's interpretation that the short test must be capable of reliably and consistently predicting whether the vehicle would pass or fail the FTP. Although testing individual vehicles with similar technologies would obtain the maximum correlation possible, and in turn, would allow selection of the most stringent short test standards possible, this would require complex calculation of individualized standards for numerous vehicle groups, which was criticized by commenters. Therefore, the procedure was simplifed by comparing test results from a broader group, i.e., one vehicle fleet, in order to reduce the burden on manufacturers and administrators of the short tests.

MVMA's claim that the NPRM did not meet minimal procedural requirements if the final determination on correlation is to be based largely on data from the Portland study [29] ignores two facts: that the NPRM listed the Portland study as a source of data to be used in establishing correlatability, and that using in-use fleet data to determine "reasonable correlation" was suggested in comments submitted by manufacturers. One MVMA member company stated that because real world influences would reduce correlation, the short tests evaluated must be conducted under real world conditions.[30]

MVMA asserted that nothing in the NPRM warned interested parties that EPA did not consider measurement of NO_x emissions or correlation between the short test and the FTP as to NO_x to be part of the statutory requirements of available technology and reasonable correlation.[31] This argument is frivolous. The lack of short tests and cutpoints for NO_x works to the manufacturer's advantage in that there will be no detection of high NO_x emitters, and as a result, no warranty liability in this circumstance. In any event, EPA's decision not to consider NO_x emissions in establishing correlation certainly should have been foreseen since the NPRM pointed out that the proposed idle short test would measure HC and CO emissions only, and the manufacturers are aware that in order to measure NO_x one of the proposed tests capable of measuring NO_x would have to be adopted by the states.

Since a short test standard for NO_x is not being established at this time, measurement of NO_x emissions is not relevant to the correlatability of the short tests being adopted. Furthermore, there is no legal requirement that NO_x emissions be considered in establishing correlation between the FTP and short tests adopted to measure only HC and CO.

Therefore, contrary to MVMA's assertion that the methodology contained in EPA's Technical Report does not resemble that in the NPRM, the methodology chosen for determining correlation of the short tests with the FTP is drawn from the NPRM and comments submitted on the alternatives proposed. In any event, MVMA and others were given an opportunity to submit comments and criticisms on EPA's conclusions, as stated in the Technical Report (see discussion in Part II below).

4. Development of Short Test Standards. MVMA claimed in its Petition that unless the regulations are reproposed, affected parties would not be accorded an opportunity to coment on the short tests and cutpoints or cutpoint methodology as they may apply to the emissions control system technology developed since the 1977 NPRM and which will be used on 1981 and later model vehicles.[32] In its Supplement, MVMA claimed that the NPRM did not discuss the possibility that EPA would consider classifying all vehicles as one group with uniform short test standards, and that adequate opportunity must be given for review of pertinent data and for comment on this allegedly startling development.[33] However, this approach was chosen to address comments on the NPRM.

Establishing short test standards to apply to all future model year vehicles was suggested by an MVMA member company in its comments on the NPRM. General Motors suggested the following: beginning with a model year in which emission standards and control system hardware have stabilized, EPA should attempt to establish reasonable correlation between the FTP and selected short test, conducted under real world conditions, determine the cutpoints from the current model year vehicles in actual use, and then carry over the selected short test and cutpoints to subsequent model year vehicles which are in all material respects the same as the model year vehicles tested.[34] As mentioned previously, General Motors also espoused use of a more general vehicle grouping than that proposed if a "gross emitter" concept were adopted,[35] as well

[24] General Motors 1977 Comments, 13.

[25] MVMA Supplement, 26.

[26] MVMA Supplement, 23.

[27] General Motors stated that a general vehicle grouping is possible if the desired result is to identify gross emitters rather than marginal failures. GM 1977 Comments, 19.

[28] MVMA Supplement, 23.

[29] MVMA Supplement, 27.

[30] GM 1977 Comments, 6.

[31] MVMA Supplement, 26.

[32] MVMA Petition, 9.

[33] MVMA Supplement, 26.

[34] GM 1977 Comments, 9.

[35] *Id.*, 78–80.

as conducting the evaluation of the short tests under real world conditions.[36]

Other commenters had objected to the proposed development of cutpoints during the course of the subject model year because vehicles not subject to the warranty requirements would be on the road while cutpoints for the same model year were being developed.

Since it would be highly impracticable to evaluate a short test for correlatability and to establish cutpoints for different vehicle groups by testing sufficiently large samples of in-use vehicles during the same model year in which the short test and standards were to apply, EPA chose to establish cutpoints (and reasonable correlation) in such a way as to address the concerns on timing and use of real world data. By deriving cutpoints from the Portland data, drawn from a large sample of current technology vehicles, the cutpoints could be established well in advance of the beginning of the applicable model year. In addition, because the standards would be based on the emissions from previous model year vehicles (1975–1977) and would not be fine-tuned to each vehicle type, they necessarily would be less stringent as applied to cleaner future model year vehicles. However, as pointed out in EPA's Technical Report, a substantial percentage of excess emissions will still be identified, retaining most of the air quality benefits of the short test when used in conjunction with I/M programs.

MVMA's reference to the recent improvements in emission control system technology and the major shift in technology that will occur in the 1981 model year (i.e., the almost universal adoption of 3-way catalytic converters and electronic engine controls) that should be considered by EPA and subjected to comment[37] already had been addressed in comments on the NPRM, and already had been considered by EPA, as described in the Technical Report. EPA concluded that short test standards developed from 1975–77 model year Federal vehicles could be applied to 1981 and later model year vehicles without prejudicing manufacturers' rights because with the lower emission standards in the future, lower short test emissions could be expected.[38]

EPA's conclusions on the impact of future technologies in adopting the uniform cutpoint/broad vehicle grouping approach have been drawn, again, from manufacturers' initial comments on the NPRM. For instance, General Motors stated that the disproportionate amount of HC and CO emitted during the first few minutes of the FTP test after a 12-hour cool-down period is especially true for present systems employing catalytic converters and will probably be more pronounced for advanced catalytic systems meeting future stringent standards. GM also stated that catalytic systems are more effective in controlling emissions after they have reached normal operating temperature.[39] Since short tests and cutpoints are applied only to warmed-up vehicles, the obvious conclusion is that a vehicle's HC and CO emissions would be at the lowest levels during application of the short test, and that future catalyst technology vehicles designed to meet lower standards would emit even less HC and CO than current technology vehicles.[40] Thus, future model year vehicles would most certainly meet short test standards derived from the earlier model year Portland vehicles, with their higher tailpipe emissions. Conversely, if a future technology vehicle, with supposedly very low emissions, exceeds short test standards developed from current model year vehicles, it would have very high probability of failing the FTP.[41]

EPA also anticipated in the NPRM the possibility that particular future technologies might not conform to the emissions pattern exhibited by most vehicles. EPA stated in the NPRM that different short tests and/or cutpoints would be developed for these vehicles. EPA also stated in the Technical Report that if unforeseen technology is developed for which the standards are not appropriate, the manufacturer could be allowed to apply for a separate short test standard for those vehicles.[42] Therefore, there is no basis for MVMA's assertion that the public record did not reveal that EPA had considered the impact of future technology changes on the proposed short tests.[43]

5. Scope of Regulations. MVMA has objected to EPA's failure to include LDT's or diesel-powered passenger cars and LDT's among any of the test fleets on which the proposed short tests were tested, even though the NPRM explictly applies to these vehicles.[44] It claims that the existing volume of LDT's and accelerating proliferation of diesel-powered cars and trucks require EPA to repropose the regulations after considering their utility when applied to such vehicles. MVMA also claimed in its Supplement that EPA did not support with any data its assumption that it could derive the LDT cutpoints by adjusting LDV data and that EPA should disclose its supportive data.[45]

The basis for EPA's approach to setting all cutpoints is set out in the Technical Report. EPA does not believe it is essential to the rule's applicability to all LDV's and LDT's that diesels or LDT's be included in the test vehicle data base. This is because the vehicles tested are adequately representative of all vehicles to be covered by the rule.

There is a sound technical basis for EPA's deriving LDT cutpoints in this way. LDT's produced in 1981 and later model years will employ the technologies used to meet 1977 model year passenger car standards, since 1979 and later model LDT emission standards were derived from the 1977 LDV standards. The 1975–1977 model year Portland LDV data adequately represents the LDT vehicle group because similar emission control technologies are used, so that 1981 LDT's would respond to short tests in the same way that those earlier model year LDV's would.[46] EPA's supporting data in this rulemaking, the testing of 1975 LDT's under the short tests to

[36] *Id.*, 6.

[37] MVMA Supplement, 11–13.

[38] Technical Report, 5.

[39] GM 1977 Comments, 19–20.

[40] GM made the general statement that emissions during warm vehicle operation are very low. GM 1977 Comment, 9–20.

[41] MVMA contends that current model year vehicles produced for use in California are more representative of the future technologies that will be used in 1981 and later models, so that current model year Califonia vehicle data should be considered by EPA. *See* MVMA Petition, 10; MVMA Comments. In support of this argument, MVMA submitted in its recent comments its testing and analysis of 82 Ford California-equipped 1975–78 model year passenger cars under the FTP and idle test, and its analysis of California 1979–80 Ford model assembly-line test data, as well as California surveillance data on 1975–77 model vehicles. *See* MVMA Comments, 11–21, Appendices A, B, C. Although MVMA's analyses and conclusions from these data are addressed more fully in EPA's Summary and Analysis of Comments, it should be noted here that MVMA's statement regarding the "* * * one drawback to the data * * * it is new vehicle data * * *" (MVMA Comments, 17) is deemed by EPA to be a significant reason for not including such data in the short test scheme chosen for 1981. MVMA concedes that "both idle and FTP emission levels may be lower than would be expected from in-use vehicles, particularly from ones which may have been misused, improperly maintained, or maladjusted." *Id.* This tends to support EPA's use of the Portland in-use data, since establishing correlation or selecting cutpoints from the cleaner, unused California vehicles would necessarily require more testing of larger vehicle samples, and application of factors to account for real world effects. In addition, EPA does not believe that MVMA's analyses demonstrate serious shortcomings of the idle test as a predictor of FTP failures of new technology vehicles, since the selected short tests and cutpoints are designed to identify only gross emitters.

[42] Technical Report, 5.

[43] MVMA Supplement, 13.

[44] MVMA Petition, 10.

[45] *See* MVMA Supplement, 32.

[46] Technical Report, 6. The Technical Report referenced the rulemaking for light duty truck emission standards, which discussed in detail the technologies expected to be used for compliance with the new emission standards.

ascertain whether the conclusions made for LDV's would apply to LDT's, also was set out in the Technical Report (Figure 8). MVMA and others were provided with an opportunity to present data or information to show that EPA's affirmative conclusion from this testing was erroneous; however, the only information presented was the reproduction of the applicable Federal 1981 emission standards and MVMA's "belief" that errors of commission for LDT's would be much higher than 5 percent.[47] This statement, by itself, is insufficient to overcome EPA's conclusion and supporting data base.

As set out in the Technical Report, diesel-powered vehicles are adequately represented because diesels generally emit lower levels of HC and CO, the only two pollutants measured by the short tests being adopted in the final rule. Therefore, a diesel-powered LDV or LDT would be less likely to fail the short tests and standards than comparable gasoline-powered vehicles. This also supports the Ec rate chosen by EPA to protect manufacturers from excessive exposure to warranty liability.

D. MVMA's Additional Reasons for Reproposal Are Without Merit

Several "new developments" which MVMA claims that EPA must consider in developing the final rule, and which it claims require reproposal of the NPRM, are EPA's proposal or adoption of a number of regulations and new information on the air quality benefits which might accrue from use of the short tests in Inspection/Maintenance programs.[48] None of these factors justify reproposal.

1. Warranty and Aftermarket Part Certification Regulations. MVMA asserted in its petition that EPA should repropose the short test regulations upon consideration and analysis of comments made by interested parties on the recently reproposed section 207(b) warranty regulations and the recently proposed section 207(a) aftermarket part certification regulations,[49] so that interested parties may comment upon the interrelationship between the three sets of regulations.[50] This contradicts previous assertions by MVMA member companies in their comments on the proposed warranty regulations, in which they claimed that EPA should promulgate the short tests prior to proposing warranty regulations, so that they and other interested parties could meaningfully comment on the warranty regulations.[51] In particular, they claimed that prior to being able to comment on the warranty regulations, it is necessary for them to know the details of the short test regulation and recommended cutpoints so that information can be developed on projected rates of vehicle failures, projected cost consequences, and whether any different calibrations to new vehicles will be required to assure that vehicles can pass the short tests.

Although EPA does not agree that EPA must promulgate final short test regulations prior to proposing warranty regulations, the suggested scheme does support EPA's view that upon the Administrator's determining that a correlatable short test exists and that the necessary equipment is available, the final warranty regulations would be promulgated. If EPA followed MVMA's logic on the need to repropose the short test regulations due to the "intricate relationship" among the various section 207 regulations, each rule would undergo numerous reproposals, and no rule would every be finalized.

In any case, interested parties were afforded an opportunity to comment both on the effect of the recent warranty and dealer certification proposals upon the short tests, and on the effect of the short test strategy outlined in the Notice of Extension upon the other two proposed rules.[52]

2. Parameter Adjustment Regulations and Changes in FTP. Other regulatory actions cited by MVMA in its Petition which allegedly "have complicated the effort to establish proper short tests"[53] are EPA's changes in the FTP[54] and the recently promulgated parameter adjustment regulations.[55] However, any impact on the short tests from these events would not destroy the correlation established between the FTP and the short tests.

MVMA asserted that EPA must consider the impact of the recently adopted parameter adjustment (PA) regulations upon the data relied on in its preliminary finding that the section 207(b) criteria have been met.[56] MVMA alleges that EPA's preliminary finding was principally based on data derived from vehicles whose failure to meet the applicable standard was largely the consequence of maladjustment or misadjustment, and that the PA regulations, which are designed to prevent such maladjustment or to require vehicles to meet standards even when maladjusted, may significantly affect the capacity of the proposed short tests to meet the statutory criteria.[57]

While the PA regulations might have affected the "reasonable correlation" determination under the NPRM, EPA's current approach, i.e., using the Portland data and a more progmatic defintion of correlation, disposes of any concerns regarding misadjusted, or tampered, vehicles. The data base for EPA's preliminary finding of reasonable correlation was based on laboratory data and a statistical method for deriving classical correlation. As mentioned previously, EPA's current approach to correlation is the short test's ability to detect vehicles with high levels of excess emissions, with an Ec rate equal to that of the FTP. This relationship between the FTP and the short tests, i.e., high short test emissions reflect high FTP emissions, is not affected by either the use of misadjusted vehicles in the data base,[58] or the prevention of misadjustment on future vehicles. This is because the reason for the high emission levels is not significant with respect to a short test's ability to identify high emitters, whereas it is significant with respect to manufacturer liability under the warranty regulations. Therefore, any impact of the PA regulations is relevant only to whether a manufacturer must repair a vehicle that fails a short test, and not to the ability of the short tests to meet the statutory criteria.

MVMA also claims that there have been numerous and potentially significant changes in the FTP since the close of the short test rulemaking, and that EPA should state its views on the impact of those changes, and should allow comment on those matters.[59] The approach adopted in the final rule, short test detection of gross emitters, disposes of any concern that incremental changes to the FTP would impact the correlatability of the short tests. All

[47] MVMA Comments, 24.

[48] MVMA Petition, 14–19.

[49] 44 FR 23784 (April 20, 1979); 44 FR 46686 (August 8, 1979).

[50] MVMA Petition, 14.

[51] See Comments Submitted by General Motors and Ford to the Public Docket on the Emission Performance Warranty Regulations (No. EN–79–6).

[52] The Notice of Extension announced that the comment period for the proposed warranty and aftermarket parts regulations would be reopened for the same 30-day period. 45 FR 6960, 6962 (January 31, 1980).

[53] MVMA Supplement, 11.

[54] MVMA Petition, 16.

[55] MVMA Supplement, 10–12.

[56] MVMA Petition, 15.

[57] MVMA Petition, 15–16.

[58] MVMA objected to EPA's failure to exlcude tampered vehicle from the Portland data. Although the Summary and Analysis of Comments addresses this objection, it should be mentioned here that correlation is to be established between tests so that the short test will predict FTP failure for both tampered and non-tampered vehicles. In addition, excluding tampered vehicles would result in an artificially clean vehicle fleet, thereby failing to account for a potentially significant real world effect.

[59] MVMA Petition, 16.

emission-related changes to the FTP made since publication of the 1977 NPRM have been designed to increase accuracy and reduce variability in the test.[60] Such refinement of the FTP would have virtually no effect on the short tests, because the changes are of insignificant magnitude when compared to the rough predictions made by the short tests.

In addition, MVMA has not identified any potential impact on the ability of the short tests to meet the statutory critieria as a result of these changes to the FTP. Although MVMA stated that a description of the FTP changes and an identification of some of their potential impact have been submitted previously by some of MVMA's member companies, MVMA's reference to General Motors and Ford petitions on FTP changes [61] provides no insight into the nature of any impact on the correlatability of the short tests, since those petitions dealt only with the impact on measurement of fuel economy. Arguably, any change which affects fuel economy results would affect measurement of emissions; however, just as EPA was unable to discern from those petitions the basis for the claimed 3 percent difference in average fuel economies from the FTP changes, there is no information from which EPA could assess the potential for any impact on the ability of the short tests to detect high HC and CO emissions which would also be detected by the FTP. MVMA also did not attempt to specify the reasons for its concern in the comments recently submitted.

C. Air Quality Benefits

MVMA asserted in its petition that EPA should publish all data being considered on the air quality benefits expected from I/M programs, and all interested parties then should be given an opportunity to comment on the validity of the analyses and judgments made by EPA in determining the benefits to air quality it expects to result from use of a short test in I/M programs.[62] Although MVMA is correct in its statement that the ultimate justification for section 207(b) short tests is air quality improvement,[63] section 207(b) does not require EPA to justify establishment of particular short tests by predicting the air quality benefits expected to accrue from their implementation, and specifically requires EPA to promulgate short test regulations upon making the statutorily-prescribed determinations. For that reason, EPA did not conduct or rely upon any air quality analyses in conjunction with its development of the final rules.

The data cited by MVMA, such as the Mobile 1 computer program, [64] were prepared for an entirely separate purpose, i.e., for States' use in preparation of their Implementation Plans under section 110 of the Clean Air Act, as amended. Therefore, there is no reason for EPA to publish data on air quality benefits from I/M programs, or to make such data the subject of public comment with regard to establishment of the section 207(b) short tests.

II. Extension to Comment Period Provided Adequate Notice and Opportunity for Comment on Relevant New Information

Although EPA has not deemed the modifications in the final rule sufficient to require additional notice and opportunity for comment on the NPRM, an additional 30 days was provided and all data relied on by the Agency, as well as analyses and conclusions from the data, were placed or referenced in the Public Docket for consideration and submission of comments by interested persons.[65] Nevertheless, MVMA has claimed the 30 day extension to be totally inadequate to assure effective public participation in the rulemaking process.[66] MVMA bases its claim on the following assertions: (1) The very limited period for comment granted by EPA is insufficient to assemble, analyze and comment upon the Portland study data;[67] (2) the issues relevant to the development of short tests are extremely complex and involve much more than the Portland study and the new information placed in the Public Docket by EPA;[68] (3) even if the necessary analysis could be performed within a 30 day period, logistic difficulties prevented effective use of that entire period of time;[69] and (4) EPA's limitation on the public comments it will consider to only those which address the impact upon the proposal of the new information it has placed in the Public Docket constitutes a refusal to consider many other issues raised by MVMA's petition that deserve public comment.[70] MVMA's allegations are without merit for the reasons set out below:

A. Information Necessary for Informed Comment.

The Portland data used to formulate the final rule, generated over a 2½ year period, was delivered to EPA in April 1979 in the form of a data tape (Element I data tape). EPA added to the data tape other in-use data obtained from eight different cities. This eight-city data was used only to support conclusions drawn from an analysis of the Portland data.

EPA's analysis of the Portland data, and incorporation of the results of the analyses in a coherent approach to develop the short test regulations, took place between April 1979 and December 1979, the date of publication of the Technical Report. This document reflected EPA's analysis and conclusions drawn from the data. Several assumptions made in the Technical Report were drawn from a second document, the Berg Report.[71] The data tape, Technical Report and Berg Report, the only information generated since the close of the original comment period which EPA has relied on in developing the final rule, were placed in the Public Docket upon the reopening of the comment period.

At the same time EPA was assessing the results of the Portland study, it was supplying data to and responding to requests for assistance in using the data from requesting parties. In this regard, EPA provided the Portland study data tape as early as July 1979 to one MVMA member at its request.[72] On December 27, 1979, the Technical Report, which contained all the information on EPA's evaluation of the data, was sent directly to MVMA. Therefore, MVMA had access to the data in July 1979 and was made aware of the extent of reliance and type of analysis applied by the Agency to the data well in advance of publication of the notice of extension.

[60] For a description of all changes EPA has made to the FTP, see "Memorandum in Support of EPA Denial of Petitions submitted by Ford and General Motors Re: Fuel Economy Test Procedure Changes", February 1979.

[61] MVMA Petition, 16 (citing Ford submission of July 6, 1979, and General Motors submission of July 27, 1979).

[62] MVMA Petition, 17–19.

[63] MVMA Petition, 17.

[64] MVMA Petition, 18–19.

[65] *See* 45 FR 6960 (January 31, 1980).

[66] MVMA Supplement, 1.

[67] *Id.*, 6.

[68] *Id.*, 8.

[69] *Id.*, 8.

[70] *Id.*, 6. MVMA added in a footnote that critical to informed comment on a rulemaking proposal is the text of the proposed rules, but that EPA has not published proposed rules to substitute for the repudiated proposed rules published in the NPRM. *Id.*, 5. However, the text of the rules proposed in the 1977 NPRM would be changed only to bring them into conformity with the short test and cutpoints adopted in the final rule. In addition, there is no requirement that agencies publish new language to be commented on if the proposed language has been changed to address, in part, comments received. *Cf. Appalachian Power Co.* v. *EPA*, 579 F. 2d 546, 851 n. 6 (4th Cir. 1978).

[71] Berg, D., "Survey of Sources of Test Variability in the 1975 Federal Test Procedure," August 1978.

[72] Ford Motor Company requested, and was sent, a copy of the data tape.

MVMA's claim that its receipt of an advance copy of the Notice of Extension was the first intimation that the Technical Report contained the basis for changes in EPA's approach in establishing the short tests [73] is totally unfounded. The Technical Report itself states that:

> In response to comments reviewed, new data, a revision to the Clean Air Act which shortened the warranty, and internal policy decisions, EPA's position (on the proposed data base, cutpoints and correlation methodology) has been revised.[74]

Moreover, in a January 16, 1980, letter to the Administrator, counsel for MVMA referred to the Technical Report as verification of MVMA's previous assumption that EPA was considering changes in its original proposal.[75]

Since MVMA apparently was aware of the revisions contemplated by the Agency in December 1979, and the data relied on previously was made available to member companies, there is no basis for MVMA's claim that "interested parties could not actually review these documents until some time after January 31, 1980, the date of publication of the Notice." [76] Nor is it true, as claimed, that "MVMA was not aware until it received a copy of the Notice (advance copy sent by EPA on January 24, 1980) that EPA intended to use, as the data source of its proposal, only the Portland study and, for a limited purpose, data from the eight city tests." [77] EPA's efforts to provide MVMA and/or its member companies with advance notice, materials and assistance in evaluating the new materials resulted in their being provided with effectively more than 60 days within which to consider and comment on any impact of those materials on previous comments to the NPRM.[78]

The extensive analyses and comments submitted by MVMA before the official close of the 30 day comment period on March 3, 1980, show that, despite its complaints to the contrary, MVMA was indeed able to perform the analyses necessary for it to comment effectively. MVMA apparently reproduced EPA's analyses and calculations and performed additional analyses on several other sets of data, resulting in its submission of over 130 pages of analysis and data presentation.

In this case, a full 30 days period was provided for comment on new data generated since the initial proposal. Considering that the Portland data and Technical Report were provided to MVMA and/or member companies well in advance of the extension, the period provided for comment by MVMA was effectively much longer. The original 5½ month comment period [79] should not be ignored, since all issues directly related to use of the Portland data and modified methodologies were raised previously. Therefore, even if the new information were sufficient to require additional notice and opportunity for comment, the 30 day extension fulfilled such a requirement, with regard to both the intent of the law [80] and the realistic capabilities of interested parties.

B. Additional Information and Issues Need Not Be Considered in this Rulemaking.

MVMA claimed that a substantial amount of additional background information must be analyzed by MVMA in order to perform the reasoned analysis which the law requires and this issue deserves. In support of this claim MVMA identified several allegedly unsubstantiated assumptions made in EPA's Technical Report, as well as 54 "unrevealed" items of information that it claims are needed to adequately assess those assumptions and other "new issues" raised by the Technical Report.[81]

EPA has considered each of the 54 requests for information which MVMA claims to require for informed assessment of the approach set out in the Technical Report. The requested documentation already has been made available for consideration and comment, or need not be made available because it is generally available or irrelevant to this rulemaking. The methodologies, assumptions and data sources relied on in formulating the conclusions set out in the Technical Report are contained in the Technical Report itself, the Berg Report, or the supportive data, which were made available to MVMA and/or its members prior to the reopening of the comment period, and which are contained in the public docket. Many of the "assumptions" MVMA raised which it claimed EPA must support with data or analyses (e.g., that the Portland FTP data is representative of the general population [82]) are based upon well known analytical methods and assumptions, and supportive information would be drawn from generally available sources such as elementary statistics textbooks. Other "assumptions" claimed to be unsupported (e.g., that measurement of NO_x is not required) are legal conclusions based upon EPA's interpretation of the statutory requirements contained in section 207(b) of the Act, and do not require supporting data and analyses.

EPA has considered each of the 54 requests for information which MVMA claims to require for informed assessment of the approach set out in the Technical Report. The requested documentation already has been made available for consideration and comment, or need not be made available because it is generally available or irrelevant to this rulemaking. The methodologies, assumptions and data sources relied on in formulating the conclusions set out in the Technical Report are contained in the Technical Report itself, the Berg Report, or the supportive data, which were made available to MVMA and/or its members prior to the reopening of the comment period, and which are contained in the public docket. Many of the "assumptions" MVMA raised which it claimed EPA must support with data or analyses (e.g., that the Portland FTP data is representative of the general population [82]) are based upon well known analytical methods and assumptions, and supportive information would be drawn from generally available sources such as elementary statistics textbooks. Other "assumptions" claimed to be unsupported (e.g., that measurement of NO_x is not required) are legal conclusions based upon EPA's

[73] MVMA Supplement, 3.

[74] Technical Report, 3.

[75] Letter from Theodore Souris, Bodman, Longley & Dahling, to Douglas M. Costle, Administrator, EPA, January 16, 1980, and attached Technical Report.

[76] MVMA Supplement, 35.

[77] *Id.*, 36.

[78] MVMA also alleges that, although EPA stated at the November 1979 EPA-Industry meeting that it would make available a copy of the computer tape, this data was not effectively available to MVMA until January 2, 1980, due to the industry shutdown for the Christmas holidays. MVMA Supplement, 36. Such an excuse certainly does not justify extending the comment period so that MVMA may perform unspecified analyses at its leisure, thereby possibly causing so much delay in the rulemaking process that the 207(b) warranty is postponed for another model year.

[79] The original comment period included three EPA public workshops held during September 1977, which provided a forum for informal discussion and submission of comments on the proposed short test and warranty regulations by parties potentially affected by the performance warranty. See 42 FR 43412 (August 29, 1977). A number of MVMA members companies participated in the workshops. See "Registrants At The September 30th Emission Performance Warranty Workshop Held in Portland, Oregon," EPA Public Docket No. MSAPC–A–79–57.

[80] The applicable procedural requirements on notice and opportunity for comment are derived from the Administrative Procedure Act, 5 U.S.C. § 553(b), rather than from the Clean Air Act, as amended in 1977, because the NPRM was issued prior to enactment of the procedural requirements in section 307 of the Act.

[81] MVMA Supplement, 29–32 and Appendix A; Mailgram from Theodore Souris to David G. Hawkins, EPA, February 4, 1980.

[82] MVMA Supplement, 30.

interpretation of the statutory requirements contained in section 207(b) of the Act, and do not require supporting data and analyses.

Finally, EPA's conclusions with regard to many issues have been based on its consideration of comments on the NPRM (e.g., previously discussed GM comments on vehicle grouping). In short, all new information and analyses relied on by EPA in promulgating the final rule were made available in the public docket. In addition, EPA did provide MVMA and others with additional background materials and assistance when requested. [83]

Since EPA had disclosed the bases for the conclusions contained in the Technical Report, it was incumbent upon commenting parties to submit information to show that these conclusions were improper, and, therefore, that the statutory criteria for establishing the short tests could not be met. MVMA apparently had sufficient information available to it to critique EPA's selection of data sources, short tests, correlation methodology, short test standards, as well as other issues.

Although MVMA makes the general assertion that it could not perform an adequate analysis of the new information without additional background materials and additional time, it does not indicate what the nature of those additional analyses would be. The only firm suggestion of potential additional analyses that it was unable to perform within the time limitation was an examination of individual engine families' errors of commission, as compared to the average. [84] However, there was no indication of what such an analysis would accomplish, i.e., how it would affect the validity of EPA's approach in treating a broad group of vehicles as the data base. Moreover, EPA has provided for exemption of particular engine families in the final rule, as discussed previously.

In short, MVMA has submitted no information to show why EPA's approach in selecting the short tests and related cutpoints for broad vehicle groups does not fulfill the statutory criteria.

MVMA argued in support of its attack on the adequacy of the extended comment period that EPA's "limitation" on the comments it will consider to only those which address the impact on the proposal of the new information it has placed in the Public Docket, "constitutes a refusal by EPA to consider any other new information, however relevant it might be, and ignore *[sic]* the many other issues raised by MVMA's petition that deserve public comment." [85] EPA's Notice of Extension invited comment on the impact which the data or analyses not previously available for comment would have on the proposed regulations and on previously submitted comments. The opportunity for comment was far reaching. The "limitation", if any, in the Notice of Extension was designed only to preclude submission of comments that had been made or could have been made during the original comment period. Even so, no party was prevented from commenting on any issue raised in the NPRM, and all comments received have been considered, placed in the public docket, and made part of the record of the rulemaking. MVMA has not specified in its Supplement or its recently submitted comments how the scope of the subject matter covered by the Notice of Extension adversely impacted on its ability to submit informed comment on all relevant issues.

MVMA also has failed to provide any specifics on why the 30 day extension was inadequate to allow submission of informed comment. MVMA made the general allegation that the complexity of issues involved in the short test rulemaking requires much more than 30 days within which to develop considered, specific comments on these issues [86]. In support of its conclusion, MVMA cited the interrelationship between the short tests and other regulations affected parties must satisfy, as well as several rulemaking actions initiated or implemented since the NPRM was published (e.g., the reproposed warranty regulations, the parameter adjustment regulations). According to MVMA, EPA's assessment of these interrelationships, and the background information supporting those assessments, must be provided to the public. [87]

As discussed previously, other warranty-related rulemaking activities would not affect the determinations to be made in establishing the short tests. Moreover, MVMA's own members have argued that, in order to assess the impact of the warranty and aftermarket part certification regulations, they must know the content of the final short test regulations. [88] Since there is some merit to this argument, EPA announced in the Notice of Extension on the short test proposal that the comment period for both the warranty and aftermarket part certification proposals was extended for an additional 30 days in order to allow interested parties to comment on the impact which the modifications to the short test proposal might have on those proposals. No comments from any party were submitted to the appropriate public dockets; nor were any comments submitted to the docket on the short test proposal on the interrelationship among the three proposals. MVMA has provided no insight at all on the effect of the refined short test proposal on those proposals, or vice versa, or the issues it would raise had a longer comment period been provided.

MVMA also cited several rules establishing emission standards for future model year vehicles (new light duty truck and high altitude emission standards), claiming that "these actions will affect the types of emission control systems utilized on future model year vehicles." [89] However, as mentioned previously, it is the emissions levels from the tailpipe that are measured by the short test, and future technology vehicles will be less likely to fail the short tests because they will be designed to meet lower HC and CO federal emission standards. Although the type of emission control system used should not cause a vehicle to fail the short test if it would not fail the FTP, again, the possibility that an unforeseen technology would cause short test failure has been taken into account, as stated in the NPRM.

MVMA and others did not raise any arguments in their recent comments to support their general claim that the emission standards regulations cited would affect the ability of the short tests to identify gross emitters with an Ec rate approximately equal to that of the FTP, despite the fact that over 60 days had lapsed from the time MVMA first raised this argument until the close of the comment period. [90]

III. Conclusion

EPA has provided interested persons with the opportunity for effective participation in the development of the section 207(b) short test regulations, and has in fact, benefitted from comments and criticisms on the proposal submitted during both the original 5½ month comment period and the recent 30 day extension. In view of the extent to which interested parties have participated in

[83] *See* mailgram from David G. Hawkins, EPA, to Theodore Souris, Bodman, Longley, & Dahling, February 13, 1980.

[84] MVMA Comments, 22–23. MVMA stated that particular engine families, with special settings, could have a much higher error of commission.

[85] MVMA Supplement, 6.

[86] MVMA Supplement, 10–11.

[87] *Id.*, 10.

[88] *Id.*, 11.

[89] MVMA Supplement, 10.

[90] MVMA submitted its Petition on December 21, 1979, and the comment period for the short test proposal closed on March 3, 1980.

the rulemaking process, reproposal of the regulations is unnecessary, and would introduce unwarranted delay into the Agency's efforts to establish correlatable short tests. Although MVMA has objected to EPA's "inexplicable haste to promulgate its final regulations for use on 1981 model year vehicles," this Agency deems the establishment of the short tests, and in turn, the warranty regulations, essential to the success of the I/M programs, which must be adopted by many States in order to attain and/or maintain the National Ambient Air Quality Standards. However, a factor that must be considered in establishing the short tests for 1981 is the lead time required by manufacturers to comply with the warranty regulations, which must be promulgated one model year prior to the applicable model year. Therefore, the Agency has attempted to satisfy the demands of timeliness by the manufacturers while providing the States with the mechanism required for implementation of the section 207(b) performance warranty requirements.

[FR Doc. 80-15718 Filed 5-21-80; 8:45 am]

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40 CFR Part 85

[FRL 1488-4]

Emission Control System Performance; Warranty Regulations

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: These regulations implement the emission performance warranty of section 207(b)(2) of the Clean Air Act, 42 U.S.C. 7541(b)(2) (hereinafter "Act"). In general, the emission performance warranty will require a vehicle manufacturer to repair, at no charge to the owner, any emission control device or system which causes a vehicle to fail an EPA approved emission short test during its useful life if the owner is subject to a penalty or sanction under state or Federal law because of the short test failure, and if the owner has maintained and operated the vehicle in accordance with the manufacturer's written instructions.

DATES: These regulations shall become effective July 21, 1980.

FOR FURTHER INFORMATION CONTACT: Mr. David M. Feldman, Field Operations and Support Division (EN-397) Environmental Protection Agency, 401 "M" Street, SW., Washington, D.C. 20460 (202) 472-9350.

Public Docket

Copies of materials relevant to this rule are contained in Public Dockets EN-79-6 and EN-79-8 at the Central Docket Section of the U.S. Environmental Protection Agency, Room 2902B, Waterside Mall, 401 "M" Street, SW., Washington, D.C. 20460, and are available for review between the hours of 8:00 a.m. and 4:00 p.m. As provided in 40 CFR Part 2, a reasonable fee may be charged for copying services.

SUPPLEMENTARY INFORMATION: EPA first proposed emission performance warranty regulations on May 25, 1977, at 42 FR 26742 (hereinafter "Proposal"). However, the August 7, 1977, amendments to the Act, Pub. L. No. 95-95 (hereinafter "Amendments"), altered some of the basic provisions of the law such that the Agency decided to repropose the regulations. The Agency reproposed the regulations on April 20, 1979, at 44 FR 23784 (hereinafter "Reproposal"). In addition to the Amendments, the Agency considered comments received in response to the Proposal and at three emission performance warranty workshops in developing the Reproposal.

The Agency held two public hearings on the Reproposal. The first was held on May 22, 1979, in Washington, D.C., and the second on May 31, 1979, in Chicago, Illinois. In addition to the comments received at these public hearings, the Agency received 69 written comments on the Reproposal. These comments were summarized by EPA and may be found at IX-2 Public Docket EN-79-6.

The Agency also received a number of comments on the Reproposal in comments on the Voluntary Aftermarket Part Certification Program regulations which were proposed on August 8, 1979 at 44 FR 46686. Those comments that related to the effect that certified parts should have on the emission performance warranty were considered in drafting this Rule.

The major comments are discussed in appropriate sections of this Preamble.

Index

I. BASIS FOR THE REGULATIONS
II. GENERAL COMMENTS
III. SPECIFIC PROVISIONS
A. General Applicability
B. Definitions
C. Warranty Statement
D. Owner's Compliance With Instructions for Proper Maintenance and Use
E. Replacement Parts
F. Warranty Claim Procedures
G. Warranty Remedy
H. Dealer Certification
I. Inclusions of Warranty Provisions in Owner's Manuals and Warranty Booklets
J. Submission of Owner's Manuals and Warranty Statement to EPA
K. Warranty Enforcement
L. Evaluation Plan
M. Reporting and Recordkeeping Requirements

I. Basis for the Regulations

A number of the provisions of the Act are relevant to the Emission Performance Warranty. These were set out in the Reproposal and will not, with the exception of section 207(b), be reproduced here.

Section 207(b) of the Act is the principal authority for the emission performance warranty regulations. This section provides as follows:

"(b) If the Administrator determines that (i) there are available testing methods and procedures to ascertain whether, when in actual use throughout its useful life (as determined under section 202 (d)), each vehicle and engine to which regulations under section 202 apply complies with the emission standards of such regulations, (ii) such methods and procedures are in accordance with good engineering practices, and (iii) such methods and procedures are reasonably capable of being correlated with tests conducted under section 206(a)(1), then—

(1) he shall establish such methods and procedures by regulation, and

(2) at such time as he determines that inspection facilities or equipment are available for purposes of carrying out testing methods and procedures established under paragraph (1), he shall prescribe regulations which shall require manufacturers to warrant the emission control device or system of each new motor vehicle or new motor vehicle engine to which a regulation under section 202 applies and which is manufactured in a model year beginning after the Administrator first prescribes warranty regulations under this paragraph. The warranty under such regulations shall run to the ultimate purchaser and each subsequent purchaser and shall provide that if—

(A) the vehicle or engine is maintained and operated in accordance with instructions under subsection (c)(3),

(B) it fails to conform at any time during its useful life (as determined under section 202(d)) to the regulations prescribed under section 202, and

(C) such nonconformity results in the ultimate purchaser (or any subsequent purchaser) of such vehicle or engine having to bear any penalty or other sanction (including the denial of the right to use such vehicle or engine) under State or Federal law,

then such manufacturer shall remedy such nonconformity under such warranty with the cost thereof to be borne by the manufacturer. No such warranty shall be invalid on the basis of any part used in the maintenance or repair of a vehicle or engine if such part was certified as provided under subsection (a)(2). For purposes of the warranty under this subsection, for the period after twenty-four months or twenty-four thousand miles (whichever first occurs) the term "emission control device or system" means a catalytic converter, thermal reactor, or other

component installed on or in a vehicle for the sole or primary purpose of reducing vehicle emissions. Such terms shall not include those vehicle components which were in general use prior to model year 1968."

Full implementation of section 207(b) requires a number of findings by the Administrator leading to emission short test regulations under subsection 207(b)(1), and also a separate finding leading to warranty regulations under subsection 207(b)(2). The Administrator has made all of the findings necessary for the short test regulations, including the finding that there are identifiable short tests reasonably capable of being correlated with the Federal Test Procedure. The Federal Test Procedure is set out at 40 CFR Part 86, Subpart B. Consequently, the Agency proposed short test regulations at 42 FR 26742 (May 25, 1977) and has published final regulations.

Under subsection (b)(2) the Administrator must "determine that inspection facilities or equipment are available for purposes of carrying out (the identified short test)." The Administrator has made this determination. Since this determination has been made, the Agency is required under the Act to promulgate emission performance warranty regulations.

II. General Comments

The vehicle manufacturers, in their comments to the Reproposal, asserted that the Act set forth a strict sequence for the promulgation of the section 207(b) regulations and that the Agency did not properly follow this sequence. According to the manufacturers, the Agency "put the cart before the horse" by proposing the warranty regulations prior to final promulgation of the short test regulations.

The manufacturers claimed that Congress intended the short test to be established by final rules prior to proposing warranty regulations, so that they and other interested parties could meaningfully comment on the warranty regulations. In particular, they claimed that Congress believed it was necessary to know the details of the short test regulation and the recommended cut points before estimates could be made as to projected rates of short test failures which in turn were necessary to project the cost of the warranty.

Ford, in support of this position, cited the legislative history of section 207(b) for the proposition that Congress believed that it would make little sense to require manufacturers to make the emission performance warranty before the shorts tests necessary to trigger their warranty liability are in existence. (See the Senate Comm. on Public Works, 93rd Cong., 2nd Sess., *A Legislative History of the Clean Air Amendments of 1970,* (Comm. Print 1974) at 337.))

EPA agrees that it would make little sense to require vehicle manufacturers to provide a section 207(b) warranty statement with vehicles before the short test is promulgated. However, EPA does not agree that Congress intended, or that the Act requires, the Agency to follow the rulemaking sequence proposed by the vehicle manufacturers. Rather, the Agency believes that the legislative history, including the parts cited by Ford, demonstrates that Congress anticipated that EPA would promulgate the warranty regulations at the time that the Administrator determined that (1) a correlatable short test exists, and (2) that the necessary equipment to conduct the short test is available, provided that the warranty regulations are not put into effect prior to the effective date of the short test regulations. Moreover, the Agency believes that once the Administrator of EPA has made the necessary findings with respect to the availability of the short test, the Agency is required to promulgate the warranty regulations.

The Agency believes that to be able to comment on the warranty proposal it was unnecessary for parties to know more than that a "correlatable" short test is available for use in I/M programs that will trigger the warranty. The number of vehicles that would fail a "correlatable" short test that would not also fail a test utilizing the full Federal Test Procedure would be insignificant. Therefore, vehicle manufacturers should not have to make any modifications to vehicles, including calibration changes, to allow them to pass any of the short tests. In addition, the notice reopening the comment period on the short test proposal invited further comments on any aspect of the warranty affected by the short tests (45 FR 6960 January 31, 1980). This notice provided interested parties with an update of the Agency's present thinking on the short tests. No comments were submitted to the Agency during this additional comment period on how the short tests might impact on the warranty. EPA believes that if the details of the short test would affect the warranty provisions then the vehicle manufacturers would have taken advantage of this opportunity to provide additional comments on the warranty.

III. Specific Provisions

The major sections of the regulations are discussed below. Included in these discussions are the significant comments made on each section as well as the changes brought about by these comments. A more extensive summary of comments is contained in a separate document which may be found at IX–3 Public Docket EN–79–6. A more detailed discussion of the basic provisions was contained in the preamble to the Reproposal. That discussion will not be repeated here.

A. Section 85.2101 General Applicability

As proposed, the warranty would have applied to all classes of vehicles and engines beginning with the model year after short tests for the applicable classes of vehicles had been promulgated. Since short tests have only been developed for light-duty passenger cars and trucks, the regulations would have applied at first only to these vehicles. However, the regulations as proposed would have been applicable for other types of vehicles the model year after short tests for those vehicles were established.

Representatives of the heavy duty engine and motorcycle industries commented that EPA had drafted the warranty proposal with only light duty vehicles in mind. These parties stated that differences in their vehicles, as well as practices used in their industries that differed from the light-duty vehicle industries, make application of the proposed warranty regulations to their industries impractical.

Since some of these arguments may have merit, and since applicable short tests do not presently exist for other than light duty passenger cars and light duty trucks, EPA has limited the applicability of these regulations to light-duty passenger cars and light-duty trucks. EPA is reexamining the matter of extending the warranty provisions to other vehicles and engines.

The Act states that the warranty will be effective beginning in the model year after the promulgation of this regulation. The Reproposal specified that this would be the 1980 model year. However, since the 1980 model year has already begun, the warranty will be applicable beginning with 1981 model year vehicles.

The Agency determined in the course of promulgating the final short test regulations that the short tests correlate with the emission standards and test procedures proposed for use at high altitudes. However since high altitude standards are expected to become mandatory with the 1982 model year rather than 1981, the warranty remedy will not be mandatory at high altitude locations until the 1982 model year (unless a vehicle manufacturer voluntarily certifies a 1981 model year vehicle to meet high altitude standards). Beginning in 1982, vehicles equipped to meet high altitude emission standards

will be eligible for section 207(b) warranty repairs at high altitude.

B. Section 85.2102 Definitions

Relatively few comments were raised regarding the Definitions section of the Reproposal. As a result, most of the definitions have remained unchanged.

Many of the vehicle manufacturers objected to the proposed definition of "Original Equipment Part," which included all parts installed on a vehicle prior to sale to the ultimate purchaser. These commenters pointed out that dealers often install components in or on vehicles prior to the sale of the vehicle to the ultimate purchaser without the direction of the manufacturer. Because vehicle manufacturers have little control over these parts or their installation, they objected to these parts being included in the definition of "Original Equipment Part", for which they would automatically be responsible under the warranty. These manufacturers, therefore, stated that the definition should be modified to exclude these parts. EPA agrees and has adopted this modification.

Many vehicle manufacturers also requested a change in the definition of "Written Instructions for Proper Maintenance and Use." As defined in the Reproposal, the maintenance and use instructions were required to be in compliance with certain existing and future EPA regulations and were limited to the instructions performed during vehicle certification. Some vehicle manufacturers questioned the Agency's authority to restrict "in-use" maintenance instructions. In particular, they asserted that EPA could not limit these instructions to maintenance performed during vehicle certification. Ford recommended that EPA, therefore, amend the definition of "Written Instructions for Proper Maintenance and Use" to read those specified in the owner's manual "as may be reasonable and necessary to assure the proper functioning of the emission control system."

The Agency did not adopt this change. Prior to the Amendments, section 207(c) of the Act contained language similar to that suggested by Ford. However, the amendments clearly altered the maintenance and use instruction requirements such that maintenance and use instructions provided with new motor vehicles and motor vehicle engines must correspond to regulations which the Administrator "shall promulgate." Thus, the Agency believes that Congress intended that EPA have greater control over maintenance and use instructions than existed prior to the Amendments. The full extent of that control will be determined through a future rulemaking under section 207(c)(3) of the Act. Until then, the maintenance and use instructions shall be required to be reasonable and necessary to assure vehicle compliance with emission standards, and also not to be more burdensome than those performed during vehicle certification.

General Motors requested that the definition of "Written Instruction for Proper Maintenance and Use" be expanded to include not only those instructions specified by the vehicle manufacturer as being "necessary" to assure compliance of a vehicle with applicable emission standards for the useful life of the vehicle, but also to include those instructions that are "recommended" for that purpose. If the Agency adopted this definition, vehicle owners could have emission performance warranty claims denied for the failure to follow a mere recommendation. The Agency believes that it is important that vehicle owners not be faced with unnecessary obstacles to recovery under the warranty. The Agency feels that limiting the maintenance necessary to assure continued warranty coverage to that which is actually necessary to assure that the vehicle meets emission standards accomplishes this goal. However, the Agency does not intend for this provision to prevent vehicle manufacturers from recommending additional maintenance. Rather, it only prevents vehicle manufacturers from denying warranty claims because of an owner's failure to perform such additional maintenance.

The Agency also received comments from vehicle manufacturers that there are some special circumstances, such as constant use at low temperatures or through deserts, where extra or different maintenance is necessary to assure vehicle compliance. However, the Agency received no technical support for these allegations. The Agency realizes that there may be special conditions where additional maintenance is necessary. Therefore, the Agency has amended the definition of "Written Instructions for Proper Maintenance and Use" to include instructions for additional maintenance under special circumstances where necessary. However, any such instruction must be specified to EPA at the time of vehicle certification, or as may be required under future maintenance and use instruction regulations.

C. Section 85.2103 Warranty Statement

The warranty statement in the Reproposal did not exactly follow the language of section 207(b) of the Act. This was because section 207(b) provides that the warranty cover the performance of a vehicle's "emission control devices and systems". However, section 207(b) defines "emission control devices and systems" differently before and after the first 24 months or 24,000 miles of a vehicle's useful life. To avoid possible confusion over the double meaning of "emission control devices or systems" the Reproposal did not specifically define these devices. Instead, the Reproposal referred to the vehicle as the object warranted and limited the remedy under the warranty to the appropriate components for the periods before and after 24 months or 24,000 miles.

The Agency has made a number of changes in this section of the Reproposal. These changes, however, are not intended to have a substantive effect. Rather they are intended to clarify the requirements of the provision.

First, the provision no longer refers to "the vehicle" as the warranted object. This change was made in response to comments asserting that this reference is misleading as it will lead vehicle owners to believe that the warranty coverage is broader than it really is.

Second, the warranty period is described as the vehicle's "useful life" as it reads in the Act, rather than for "a period of 5 years or 50,000 miles (whichever first occurs)," as it read in the Reproposal. Although all light-duty vehicles, including light-duty trucks, are presently certified to have a useful life of 5 years or 50,000 miles (whichever first occurs), some light-duty vehicle classes may eventually have longer useful life periods. If any such vehicles do have a longer useful life, they will be expected to be warranted for that full period.

The third change made in this section is in the description of the required remedy for vehicles that fail a short test after 24 months or 24,000 miles. Under the Reproposal, a manufacturer would have been required to remedy a nonconformity caused by those "components or modifications to components" installed in or on a vehicle for the sole or primary purpose of reducing vehicle emissions and that were not in general use prior to model year 1968.

The words "modifications to components" raised considerable objection from many commenters. These commenters asserted that the Act requires vehicle manufacturers to

warrant components, not "modifications to components." This additional coverage, they asserted, was an illegal attempt to expand the scope of the warranty in direct contradiction to the intent of Congress that the warranty be narrowed to limit the potential anticompetitive effect which accompanies broad warranties.

The Agency's intent was to clarify the warranty through the use of the above language, not expand it. The comments received showed that the Agency is in agreement with most of the commenters as to what should be covered by the warranty during this period. For instance, Ford explicitly agreed that an electric choke and a dual diaphragm vacuum advance unit, the two examples of "modifications" cited by the Agency in the preamble to the Reproposal, should be covered items. However, Ford believed that these items could be covered because they are themselves components installed primarily for emissions purposes. The Agency, therefore, had deleted the words "modifications to components" from this section as it has apparently caused, rather than limited, potential confusion.

Many parties requested that EPA promulgate a list of parts covered after the initial 24 month or 24,000 mile period. Because of the amount of time it takes to promulgate a rule, the Agency does not believe that it is possible to comply with this request in a timely manner such that all new parts installed on vehicles for emissions purposes would be specified at the beginning of the model year. EPA believes that Congress desired that all new parts installed for emissions purposes be included. Therefore, EPA will not develop lists through the rulemaking process, but rather will, from time to time, publish in the **Federal Register** a generic list of parts that it believes should be warranted under the emission performance warranty for the vehicle's full useful life. Such a list, reflecting EPA's current views in this regard is included as an appendix to the regulations promulgated today. These lists are not intended to be all inclusive. The Agency expects vehicle manufacturers that use different emission control technologies to warrant all "emission control devices and systems" even if they are not included in the EPA list. However, the Agency believes that, at a minimum, the components listed in the Appendix to these regulations should be covered by the emission performance warranty for the full useful life of a vehicle for present technology vehicles. This list is consistent with a list suggested by Ford Motor Company, the only party that offered such a list in commenting on this point.

Commenters also disagreed as to what should be a covered "emission control device or system" for the initial 24 month or 24,000 mile period. Although many, including Chrysler Corporation, agreed with EPA's determination that all vehicle components are covered during that period, others thought that EPA's interpretation was overbroad and, as a result, anticompetitive. Of those that thought that EPA's determination was overbroad, some suggested that the coverage during this initial period be limited to the same components that Congress specified for the remainder of the vehicle's useful life. Most of these commenters suggested that the list be broader than the post-24 month or 24,000 mile list, but still be limited to certain parts which have a demonstrable effect on vehicle emissions.

The Agency believes that Congress intended that any vehicle components necessary to remedy a nonconformity pursuant to the requirements of section 207(b) be covered by the warranty for the first 24 month or 24,000 mile period. As a result of the Proposal, Congress was aware of EPA's interpretation of the phrase "emission control devices and systems," as well as any potential anticompetitive consequences, at the time it amended the Act in 1977. However, Congress chose to alter EPA's interpretation only for the period after 24 months or 24,000 miles. The Agency, therefore, believes that Congress supported EPA's interpretation for the initial period and meant for it to remain unchanged.

D. Section 85.2104 Owner's Compliance With Instructions for Proper Maintenance and Use.

The overall scheme for demonstrating an owner's compliance with the instructions for proper maintenance or use has been slightly modified in the Final Rule as a result of the comments received on this provision.

The Reproposal set forth a scheme for demonstrating compliance with the written instructions for proper maintenance and use. This scheme was primarily based on an effort to balance the interests of the vehicle manufacturers, vehicle owners, and the various segments of the automotive aftermarket parts industry. Under the scheme, the vehicle manufacturer would bear the initial burden of finding evidence of improper vehicle maintenance that relates to the particular nonconformity. Only upon such a finding would the vehicle manufacturer be allowed to ask the vehicle owner to present evidence that a particular maintenance instruction was performed. If the manufacturer found no objective reason to believe that an instruction was not followed, or if such an objective reason existed and the owner presented evidence to the contrary, the owner would be considered to have complied with the written instructions for proper maintenance and use unless the manufacturer could show that the vehicle failed the short test because (1) the maintenance was performed on the vehicle in a manner resulting in a component being substantially misadjusted, (2) the vehicle was tampered with, or (3) the vehicle was abused.

Some commenters believed that too great a burden would be placed on vehicle manufacturers under the scheme described in the Reproposal, while others believed that the scheme would make it too easy for vehicle manufacturers to avoid their warranty obligations. Some commenters believed that the scheme represented a proper balance between the competing concerns of consumer protection and a vehicle manufacturer's right to avoid paying for improper claims. The Federal Trade Commission stated that the scheme would be "procompetitive" as it would make it difficult for vehicle manufacturers to deny emission performance warranty claims arbitrarily on the basis of work performed by independent repair facilities.

EPA remains convinced that the procedure for demonstrating owner non-compliance with the maintenance and use instructions is not overly burdensome for vehicle manufacturers. Normal diagnostic procedures would require that the cause of the nonconformity be identified under any condition. Once these procedures are performed, reasonably informed mechanics and service personnel can then readily evaluate whether the identified problem is related to any required maintenance. Further, EPA believes that the scheme set forth in the Reproposal is consistent with the Congressional intent that the warranty be invalidated only upon a showing "by the manufacturer," that the owner abused or did not maintain his or her vehicle. (See H.R. Rep. No. 95–564, 95th Cong., 1st. Sess. 168 (1977).) The Agency does not believe that this scheme relieves vehicle owners of their responsibility to maintain their vehicles in accordance with manufacturers' instructions. It merely sets forth how determination of compliance with this obligation are to be made.

The Reproposal specifically requested examples of what could constitute "objective evidence" of noncompliance with an instruction. Only one vehicle manufacturer chose to provide a possible list. However, the examples contained in that list, although likely acceptable under the objective evidence criterion, were also very vague. Therefore, the Agency doubts that it is possible to provide a specific list now. However, if the vehicle manufacturers have difficulty with this standard the Agency will work with them to establish a list of specific examples.

The Agency does not intend for this "objective evidence" finding to present vehicle manufacturers with an insurmountable barrier from denying improper warranty claims. In some cases, for example, objective evidence could mean that the performance of a particular maintenance instruction is so integral to an identified part failure that the fact that the failure occurred is objective evidence that the maintenance was not performed. The Agency will not bring actions for civil penalties based upon vehicle manufacturers' requests for evidence of compliance with instructions for maintenance and use made in good faith even if based on somewhat questionable "objective evidence."

Under § 85.2104(c) of the Reproposal, it was unclear what type of evidence a person who performs his or her own vehicle maintenance would have to show in order to prevent having a warranty claim denied under paragraph (d)(1). Many commenters questioned this uncertainty and stated that they believed that this might force such persons to needlessly bring their vehicles to repair facilities to protect their warranty coverage.

The Agency believes that any competent individual should be able to perform vehicle maintenance and maintain emission warranty coverage. Further, section 207(c)(3)(A) of the Act specifically states that maintenance may be performed by individuals. Therefore, the Agency has redrafted paragraph (c) to specify how a person who performs his or her own maintenance may demonstrate compliance with the maintenance instructions. First, the owner (or any party acting on behalf of the owner) may present evidence that he or she purchased the proper parts for carrying out the maintenance instruction in question. Second, for maintenance requiring special knowledge or tools to perform, the owner should be prepared to inform the vehicle manufacturer, upon request, of the procedures used to perform the maintenance, as well as to state where he or she obtained access to any necessary specialized equipment.

Although the rule does not require vehicle manufacturers to supply a maintenace logbook with each new motor vehicle, the Agency encourages manufacturers to do so. If a vehicle manufacturer does supply a maintenance logbook, or if a vehicle owner obtains an appropriate logbook for a vehicle, then the completion of the logbook may constitute evidence of compliance with the instructions for proper maintenance and use under this final rule. For all service not performed by the owner, a completed logbook by itself will qualify as evidence of compliance with a maintenance instruction if it has been validated by someone who regularly engages in the business of servicing automobiles. For basic maintenance items that do not require special knowledge or tools, a maintenance logbook completed by any party, including the vehicle owner, could qualify as evidence.

Perhaps the most heavily commented upon segment of this section of the Reproposal was the set of limitations upon a vehicle manufacturer's ability to deny warranty claims set forth in paragraph (e). Although a few parties were in favor of one or more of these limitations, the majority of those commenting on this aspect were opposed to them. In light of the objections to these limitations, the Agency has re-evaluated each of them, making changes where appropriate.

The first limitation was that no emission performance warranty claim could be denied on the basis of maintenance or service performed by a dealer or other authorized service agent of the manufacturer. EPA based this limitation on an "agency" theory. Parties objected to this limitation for two reasons. Some of the vehicle manufacturers argued that dealers are not their agents, but are independent businessmen. Other commenters, including the Federal Trade Commission, feared that this limitation could be anticompetitive as it would drive cautious vehicle owners to dealers for routine servicing so as to be assured of continued emission performance warranty coverage. Further, these parties pointed out that this provision distinguishes between service performed by franchised dealers and other commercial repair establishments. Such a distinction they argued is prohibited by sections 207(c)(3)(B) and 203(a)(4)(C) of the Act.

The Agency remains unconvinced that franchised dealers are not agents of vehicle manufacturers for the purpose of performing emission related maintenance and repair. However, to prevent the possible anticompetitive impacts that could result from this limitation, this section has been amended to provide that vehicle manufacturers cannot deny warranty claims on the basis of any predelivery service or warranty work, both of which are performed by a repair outlet at the direction and expense of a vehicle manufacturer. This would include non-franchised warranty outlets as well as franchised repair facilities. The Agency believes that vehicle manufacturers can and will retain sufficient control over the performance of these types of services to justify this provision. Both types of services traditionally have been provided only by facilities authorized by vehicle manufacturers. As is discussed more fully below, in designating such facilities, the manufacturer is subject to appropriate antitrust laws. Therefore the adoption of this provision should not cause any anticompetitive effects.

The Agency is still concerned that vehicle owners will be misled by vehicle manufacturers' endorsements of their franchised dealerships in owners' manuals and in various advertisements. By limiting liability as discussed above, the Agency does not intend to preclude any individual from making an "apparent agency" argument in support of a warranty claim. (An apparent agency situation arises where a party appears to hold another out as an agent even though that other is not actually an agent. In some instances the courts have held the principal liable for the acts of such "apparent agents.") Moreover, the Agency does not intend for the amendment of this exception to preclude an "agency" argument from being raised under special circumstances that could arise in a recall action under section 207(c) of the Act.

Vehicle manufacturers also objected to the provision in the proposal that stated that vehicle manufacturers cannot deny warranty claims on the basis of maintenance performed by certified or licensed mechanics or repair facilities. The vehicle manufacturers asserted that it was unreasonable and unfair that they be responsible for work performed by parties over which they have absolutely no control, particularly since EPA is apparently not setting minimum standards for such certification or licensing. The Agency has decided to delete this provision from this rule. However, the Agency is investigating the idea of setting standards for a mechanics or repair facility certification program. If such standards are set by EPA or another

governmental organization, the Agency will reconsider this provision.

A number of objections were raised in regard to paragraphs (e)(3) and (e)(4) of proposed § 85.2104. These paragraphs would have precluded a vehicle manufacturer from denying an emission warranty claim on the basis of any work performed to rectify an unsafe condition, or work not performed or misperformed due to a cause which the manufacturer should have foreseen would result in such malmaintenance.

Objections were raised to these provisions on a number of grounds. Some argued that these standards were too vague. Others argued that these exceptions were unfair because maintenance instructions are approved by EPA at the time of vehicle certification. Some argued that these provisions would encourage improper maintenance and even vehicle tampering in an attempt to achieve better vehicle performance. Finally, some stated that these limitations set up a strong enforcement mechanism, but are virtually useless to consumers. The Agency, as a result of these comments, has decided to modify these provisions.

Under § 85.2104(e)(2), as modified, no manufacturer will be allowed to deny an emission performance warranty claim on the basis of emergency work performed to rectify an unsafe condition, provided the vehicle owner has used or is using reasonable diligence to have a temporary repair made into a more permanent one. For example, if a vehicle owner must misadjust or disconnect a vehicle component while traveling because of a safety problem that manifests itself at a time when it would be unreasonable for the owner to bring the vehicle in for a permanent repair, the owner could not be denied a warranty claim on the basis of such temporary repair provided that he or she used reasonable diligence to bring the vehicle in for a permanent repair. What constitutes reasonable diligence will vary depending upon the circumstances. Although not required by these regulations, a vehicle manufacturer may want to include space in the owner's manual or maintenance instructions in which vehicle owners can record dates and times of such emergency repairs.

Proposed § 85.2104(e)(4), regarding foreseeable malmaintenance, has been amended to provide that no emission warranty claim may be denied for any reason "determined to be attributable" to the vehicle manufacturer. Under this exception, vehicle owners will not look to what a vehicle manufacturer should have known would happen. Instead, they will look to see if maintenance was not performed, was improperly perfomed, or even that a vehicle was tampered with, because of a problem that is attributable to the manufacturer. For instance, if a service procedure is so complicated as to be beyond the competence of most mechanics or requires tools or other equipment not readily available in the field, then failure to properly perform such service procedure would be attributable to the vehicle manufacturer and could not be used as a basis to deny an otherwise valid emission performance warranty claim. Although it is the responsibility of vehicle manufacturers to repair vehicles which fail for such reasons, the Agency will not consider it a violation of the Act for a vehicle manufacturer to deny claims on the basis of improper maintenance or vehicle abuse which is later determined by the Agency or a court to be attributable to the vehicle manufacturer, provided that the denial was made in good faith and that once the vehicle manufacturer is made aware that the lack of maintenance or tampering was attributable to it, that it promptly fix the vehicle or reimburse the vehicle owner and repair vehicles under warranty for similar circumstances that arise later.

The final rule continues to provide that an emission performance warranty claim may not be denied on the basis of: (1) The use of any non-certified part or noncompliance with any written instruction for proper maintenance and use which is not relevant to the reason that the vehicle failed to comply with applicable emission standards; or (2) the use of any fuel which is commonly available in the geographical area in which the vehicle is located, unless use of that particular fuel is prohibited in the maintenance and use instructions with a sufficient description for a vehicle owner to reasonably know which fuel(s) not to use.

Some parties stated that the geographically available fuel limitation should be limited to fuels recommended by the vehicle manufacturer. Some of these manufacturers expressed concern that fuels such as "gasohol" are untried and that vehicle manufacturers should not be responsible for component failure resulting form the use of such fuels. The Agency believes that fuel requirements specified for vehicles by vehicle manufacturers should be followed by owners. However, all limitations on fuel should be clearly specified and reasonable. This means that there should be an adequate amount of any specified fuel available in the geographic area and that information should be provided such that the owner can readily assure compliance with that limitation (e.g., minimum octane requirement).

Section 211(f) of the Act prohibits the introduction into commerce of potentially harmful fuel and fuel additives without a waiver from the Agency. This prohibition will provide vehicle manufacturers substantial protection from incurring emission warranty costs associated with part failures or excess emissions resulting from any new fuels or fuel additives.

E. Section 85.2105 Replacement Parts

Many of the commenters stated that they were not able to fully comment on any provision of the Reproposal dealing with replacement parts because they were uninformed as to what the requirements will be for the aftermarket part certification program. However, the Reproposal set forth how the aftermarket part certification program would affect the warranty, which is what commenters needed to evaluate the influence of that program on the proposed regulations. Commenters have also had an opportunity to comment on the stringency of the Part certification regulations in light of the warranty requirements since the certification regulations were proposed on August 8, 1979 at 44 FR 46686. During the public hearings on the aftermarket part certification proposal, it became apparent that much of the industry did not take advantage of the opportunity to comment on the impact of the part certification program on the warranty during the section 207(b) comment period. The Agency therefore extended the comment period for the certification program from November 12, 1979, to January 15, 1980, and further requested comments on how the certification program would impact on the warranty, 44 FR 62914 (November 1, 1979).

Generally, the vehicle manufacturers asserted that it would be illegal for the Agency to hold them vicariously liable for parts manufactured by others. They argued that, although a warranty should not automatically be voided on the basis of the use of a certified part, the warranty should be invalid if the certified part is defective or not actually equivalent to the original equipment part.

The Agency does not agree. As reflected in section 207(b), Congress clearly intended that consumers be able to purchase certified parts without having to be concerned about losing their emission performance warranty coverage. If the Agency were to follow the scheme set forth by the vehicle manufacturers, vehicle owners would not have this assurance.

Rather, owners would fear that a vehicle manufacturer would merely allege that the part is defective or otherwise improper and deny the claim. This could encourage vehicle owners to use only original equipment parts, contrary to the legislative intent.

Even if the manufacturers of certified parts warrant that they will reimburse a vehicle owner for repairs that would have been covered under the emission performance warranty had the certified part not been defective, the problem would not be remedied. It will often be difficult to determine whether an aftermarket part caused a vehicle to fail a short test because it is defective or because it is not actually equivalent to the original equipment (OE) part it replaced. This could result in neither the vehicle nor part manufacturer assuming liability for the repair. If a consumer may be forced to go back and forth between parts manufacturers and vehicle manufacturers, he or she may simply not risk the use of any parts other than OE parts, whether they are certified or not.

As thoroughly discussed in the comment of the Automotive Products Emissions Committee to the part certification proposal, Congress created the aftermarket part provisions to prevent potential anticompetitive impacts on the automotive aftermarket industry. If a vehicle manufacturer may refuse to repair a vehicle because a certified non-original aftermarket part is defective and, as a result, people choose not to use certified parts, the purpose of the provision will be defeated. The aftermarket provision will work only if the vehicle manufacturer honors claims in every instance. Therefore, the Agency believes that Congress intended that the vehicle manufacturer honor claims involving certified parts, even if the parts are defective, provided the vehicle manufacturer may be reimbursed for the expenses of such activities by the aftermarket part manufacturer.

The vehicle manufacturers assert that Congress included the provisions relating to part certification in the Act to assure that business would go on as usual. They assert that they presently do not invalidate section 207(a) emission warranty claims merely because non-OE parts are used, but do so only if the parts are determined by them to be nonequivalent or defective. The part certification provisions, they contend, were meant to preserve the latter exception.

The Agency does not agree that Congress included the aftermarket part certification provisions in the Act merely to ensure that vehicle manufacturers follow past practices that may already be required by antitrust laws. Rather, the Agency believes that Congress included the provisions to prevent the emission performance warranty, coupled with today's business practices (including potential denial of warranty claims based on the equivalency or performance of a part), from creating a market shift.

In fact, prior to the Amendments, EPA had proposed guidelines for a voluntary aftermarket part certification program. However, because EPA had no authority to make certification of a part binding on a vehicle manufacturer, the program was considered by many to be anticompetitive and anti-consumer, even if the part manufacturer provided its own warranty with its certified parts. For example, the Subcommittee on Environmental Problems Affecting Small Business in its Report on the Monopolistic Tendencies of Auto Emission Warranty Provisions, H.R. Rep. No. 93–1628, 93d Cong. 2nd Sess. 31 (December 18, 1974), commenting on the EPA proposed certification program which would have required a warranty of certified parts, stated;

> The parts certification program merely proliferates the number of warranties without providing any mechanism for adequately determining why the emission control system failed. Thus, should the parts manufacture dispute the franchised dealer's assertion that the replacement part caused the failure, the consumer is left with no means to resolve the dispute, other than court action which would probably be so time consuming as to be prohibitive."

Therefore, rather than have EPA put out a program which would not be binding on vehicle manufacturers, EPA believes that Congress amended the Act to make part certification binding on vehicle manufacturers.

This view is not inconsistent with the Court of Appeals decision in *Chrysler Corporation v. EPA*, 600 F2d. 904 (D.C. Cir. 1979), which invalidated EPA regulations promulgated under the Noise Control Act. The regulations placed warranty liability on the manufacturer of an unfinished truck for work performed by a subsequent manufacturer who completes the truck and is unrelated to the first manufacturer. In that case, the Court pointed out that there was nothing in the Noise Control Act of 1972 or its legislative history that would support a regulation imposing liability on one party for actions of another party. Here, the Agency believes that both the plain language of the statute, as well as its legislative history, mandates imposing such liability.

To assure an equitable situation, the Agency intends to incorporate requirements in the final aftermarket part certification regulations which will ensure that vehicle manufacturers will be reimbursed for all emission performance warranty costs resulting from repairs necessitated by a defective or nonequivalent certified part.

Some representatives of the aftermarket part industry objected to being liable for warranty repairs necessitated as a result of their parts. However, as will be discussed further in the preamble to the final part certification regulations, the Agency believes that this scheme is equitable, as it is only reasonable to expect a part certifier to reimburse a vehicle manufacturer who incurred expenses due to a fault in a certified part. Much of the part manufacturers' concern centers around their fear that they will have no role in determining whether their parts caused the emission nonconformity. The Agency does not intend for this to be the case. Rather, this requirement will remove an owner, who is likely to have little or no ability to determine the cause of an emission nonconformity, from the decision and instead allow two knowledgeable parties, the part manufacturer and the vehicle manufacturer, to determine the cause of the emission nonconformity.

The Agency does not believe that any party will incur significant costs because of this scheme. The scope of warranty coverage is limited after the first 24 months or 24,000 miles. As stated in the Economic Analysis, the Agency expects that relatively few valid warranty claims will be made for vehicles during this period of limited coverage.

Prior to the end of the initial 24 month or 24,000 mile period, the Agency believes the vast majority of vehicles will still have the OE part installed. Since the amount of maintenance required of most vehicles during this period is limited, few claims should be the result of failures by certified parts. This is especially true since the certification program will assure that certified parts do not cause vehicle emissions to exceed standards.

The Agency believes it must follow the Congressionally mandated scheme and require that vehicle manufacturers honor warranty claims resulting from properly installed certified parts. The Agency notes, however, that outside of an emission warranty situation, part manufacturers, and not vehicle manufacturers, will be expected to deal with problems arising from use of their parts.

Some part manufacturers stated that the Reproposal made it too easy for vehicle manufacturers to deny claims on

the basis of uncertified parts. These part manufacturers stated that this will force them to certify their parts and, therefore, the aftermarket part certification program will not actually be voluntary as intended by Congress. The vehicle manufacturers, on the other hand, stated that they believed that Congress intended for them to be able to deny a claim simply on the basis of the use of an uncertified part.

The Agency does not believe that Congress intended the result set forth by the vehicle manufacturers. To do so would mean that Congress intended for manufacturers of uncertified parts to receive less protection than they receive today. EPA does not believe that the certification provisions were meant merely to limit vehicle manufacturer liability.

Neither does it agree with those members of the automotive aftermarket industry who assert that it is up to a vehicle manufacturer to prove conclusively that an uncertified part is defective or unequivalent with regard to its effects on emissions. Instead, the Agency believes that it is reasonable only to expect vehicle manufacturers to provide evidence that the uncertified part has caused the vehicle to fail the emission short test. Once the vehicle manufacturer provides this evidence, it would be able to deny the emission performance warranty claim, unless the vehicle owner or the part manufacturer could prove that the uncertified part did not cause the vehicle to fail the emission short test.

The Reproposal set forth different degrees of evidence that a vehicle manufacturer would have to provide prior to denying an emission warranty claim on the basis of the use of an uncertified part, depending upon whether a certified part was available at the time the uncertified part was installed. Based upon the comments, the Agency felt that the distinction between the two types of situations was too confusing and that it would be simpler to treat all uncertified parts the same. Therefore the final rule does not distinguish between those parts for which a certified replacement was available and those for which there was not.

F. Section 85.2106 Warranty Claim Procedures

The warranty claim procedures are basically unchanged from the Reproposal. The time period for making determinations of warranty coverage has been extended to alleviate some of the concerns of the vehicle manufacturers. However, the regulations now provide that if a state requires a vehicle to be repaired within a shorter time frame than normally allowed by the regulations, then the determination and repair must be made within the shorter time frame.

The vehicle manufacturers uniformly commented that the time limit for deciding the validity of warranty claims was too short even though most admitted that almost all claims could be decided well within the proposed time limit. The Agency expects that no vehicle manufacturer should have trouble complying with the time requirement. Further, the Agency believes that the limit is reasonable and necessary to assure that emission problems with vehicles are corrected expediently, and no owner will be forced to incur any additional penalty or sanction as a result of delays attributed to the vehicle manufacturer.

The vehicle manufacturers also asserted that the time limit should take into account factors outside their control, such as acts of God. The agency agrees and therefore has modified the regulations such that the time for responding to emission performance warranty claims is tolled when a delay results from a cause beyond the control of the vehicle manufacturer or the authorized repair facility, such as an act of God.

One issue heavily commented upon was that of whether independent repair facilities should be allowed to perform warranty repairs. The Reproposal would have allowed manufacturers to designate that only their dealers can perform emission performance warranty repairs. A discussion of the basis upon which that decision was made is contained in the preamble to the Reproposal. Because segments of the automotive service industry and the Bureau of Competition of the Federal Trade Commission believed that allowing vehicle manufacturers to designate only their franchised dealers as warranty repair facilities would have severe anticompetitive impacts and possibly would be in violation of antitrust law, the Agency stated that it would continue to consider the issue.

The Agency received well reasoned comments on both sides of the issue. Most of those parties who believed that non-franchised repair facilities should be able to perform warranty repairs did not advocate allowing all independents to perform such repairs. These parties agreed that vehicle manufacturers should be able to designate who can perform warranty repairs, but alleged that it was unreasonable and perhaps illegal for them to arbitrarily designate only their dealers as warranty repair stations. A frequent suggestion was for vehicle manufacturers to establish similar requirements (equipment, mechanic qualifications, record keeping, etc.) for independent repair facilities desiring to perform emission performance warranty repairs, as they have for their dealers. In addition, some suggested that EPA require vehicle manufacturers to designate only those repair facilities that can compete competitively for this service with the manufacturer franchised facilities.

Parties suggesting that EPA require that independents be permitted to perform warranty repairs cited the general intent of several Clean Air Act provisions, which was to limit the potential anticompetitive effect of the warranty. These parties were unconvinced that the position stated by EPA in the Reproposal was conclusive as to EPA's lack of authority to require vehicle manufacturers to permit independent repair facilities to perform emission performance warranty repairs. They claimed that the language cited in the Reproposal from the statute and its legislative history clearly implies that Congress intended that vehicle manufacturers be able to designate their own warranty outlets but only if independent repair facilities were also designated; otherwise, their exclusion would be anticompetitive.

These parties further disagreed with EPA's interpretation of the statement in the Conference Report that "to the extent permitted by the Moss-Magnson [sic] any establishment (would have) * * * the right to perform work covered by the section 207(b) warranty with the right to reimbursement by the vehicle manufacturer." EPA stated in the Reproposal that since the Magnuson-Moss Act allows manufacturers to designate who performs warranty repairs, non-franchised repair facilities could perform warranty repairs, only to the extent that vehicle manufacturers chose to designate them.

The Federal Trade Commission and other parties in favor of independents performing emission performance warranty repairs pointed out that while the Magnuson-Moss Act generally authorizes product manufacturers to choose their warranty establishments, it also provides that nothing in that Act shall be construed to "repeal, invalidate, or supersede the Federal Trade Commission Act" or any other antitrust statute, 15 U.S.C. 2311(a). Consequently, they suggested that the Conference Report language should be read to require vehicle manufacturers to choose warranty outlets so as to minimize the anticompetitive effects. This would

include allowing independents the opportunity to participate.

The vehicle manufacturers agreed with the statement in the Reproposal that EPA cannot require vehicle manufacturers to designate non-franchised repair facilities as warranty outlets. In addition to the statements in the Reproposal, these parties pointed to the House Commerce Committee bill, which would have expressly permitted the Agency to promulgate regulations allowing independent garages to perform warranty repairs (see H.R. Rept. No. 95–294, 95th Cong., 1st Sess. 424 (1977)). This aspect of the bill was rejected by the House in favor of the Dingell-Broyhill amendments, which expressly included a provision allowing manufacturers to control the performance of paid warranty work. In addition, these parties focused on the words of Congressman Broyhill during the debate over the adoption of the Dingell-Broyhill amendments. He stated that although the amendment would in no way restrict the ability of the independent parts, repair, or service outlets to service or maintain a vehicle in order to keep a warranty valid, or to perform non-warranty repair work, that "as with any warranty, whether it relates to any large consumer product, the manufacturer has the right to specify who may do the work for which it bears both the cost and the responsibility for repair." Further, Congressman Broyhill went on to say, "This is not only consistent with the concepts of the Moss-Magnuson (sic) Warranty Act, but is also supported by the trade associations which represent more than 166,000 aftermarket repair firms." 123 Cong. Rec. 5138 (daily ed. May 26, 1977).

In addition, proponents on both sides of the issue set forth numerous policy reasons in behalf of their positions. These policy discussions are set forth in more detail in the comment summary, which can be found at EN–79–6 at IX–2.

After careful consideration of all of the comments received on this issue, the Agency has decided that it lacks authority to require vehicle manufacturers to allow independents to perform emission performance warranty repairs. However, the Agency encourages vehicle manufacturers to do so. Further, to the extent that any existing or future antitrust law requires vehicle manufacturers to do so, this regulation should not be construed as permitting a vehicle manufacturer to do otherwise. Indeed, the regulations provide that to the extent required by any law, whether state or Federal, whether statutory or common law, a vehicle manufacturer is required to let independent repair facilities participate in performing warranty repairs.

Two other significant changes were made in this section. First, under the Reproposal, vehicle manufacturers would have been required to pay for diagnosing vehicles even if a diagnosis resulted in a vehicle's being ineligible for an emission warranty claim. The final rule will require the vehicle manufacturer to bear the cost of diagnoses leading to honored claims only. This change was made in response to comments on the fairness and legality of providing otherwise, and also to charges of the Federal Trade Commission and the independent aftermarket associations that the proposed provision would be anticompetitive.

Second, § 85.2106(f) of the Reproposal would have required vehicle manufacturers to bear the cost of repairs performed without the vehicle owner's consent if the vehicle had been left with an authorized repair facility for an emission performance warranty diagnosis or repair. This paragraph has been deleted. The Agency believes that many state and local laws already address this situation. However, if the Agency determines that warranty repair facilities are taking advantage of having vehicles returned to them for emission warranty repairs, the Agency will reconsider amending the regulations to prevent such abuse.

G. Section 85.2107 Warranty Remedy

Proposed § 85.2107(a)(2) was criticized by many parties as being overexpansive. This paragraph would have required vehicle manufacturers to repair, free of charge, all components which must be adjusted, repaired or replaced to assure the continued performance of a described emission control device or system for the remainder of the vehicle's useful life. Read literally, this paragraph would have required a vehicle manufacturer to replace, under the warranty, a part such as a failed spark plug even if the vehicle had been in use for greater than 24 months or 24,000 miles and the "emission control device or system", such as a catalyst, was itself unharmed, merely because the part could harm such device or system in the future. The Agency did not intend this result. Rather, the Agency intended that after the initial 24 months or 24,000 mile period, a spark plug would be replaced under the warranty only if (1) it had already failed, (2) such failure contributed to a catalyst failure, and (3) failure to repair or replace would prevent the replacement catalyst from performing its function. This paragraph has been modified accordingly in the final rule.

Even assuming the interpretation noted above, many parties claimed that the proposed provision was beyond the scope of the warranty and anticompetitive. Other parties did not agree and expressed their belief that the provision was well within the intent of Congress and, in addition, would be necessary for a workable warranty program. The Center for Automotive Safety asserted that the anticompetitive claims of the aftermarket part and service industry were greatly exaggerated and, in support of this statement, pointed to the rapid growth of the independent automotive aftermarket part and service industry during the late 1960's, when many new vehicles were covered by a more comprehensive warranty for 5 years or 50,000 miles.

The Agency believes that the inclusion of this provision, as modified, is necessary. It makes no sense to replace a failed part, such as a catalyst, which fails as a result of a second component, such as a spark plug, and not to replace the second component to prevent the replaced part from failing promptly for the same reason its predecessor did.

Moreover, it is significant that the section 207(b) warranty is a "performance warranty" and not a "defect warranty." As such, the warranty covers the performance of a covered part. Obviously a catalytic converter which has failed as a result of a failed spark plug will not perform properly unless the spark plug is also replaced.

The Agency believes that Congress limited the scope of the warranty after the initial 24 month or 24,000 mile period in response to concerns of the automotive aftermarket industry that too broad a warranty would be anticompetitive. As originally proposed, the warranty would have covered spark plug changes, valve and carburetor adjustments, air filter changes and other "tune up" services for the full useful life of the vehicle. Therefore, many parties feared that vehicle owners would routinely have their scheduled maintenance performed under the warranty. This, they feared, would have a substantial anticompetitive impact on the automotive aftermarket. Therefore, the Agency believes that Congress amended the Act to assure that scheduled maintenance would continue to be performed at any place of the owner's choosing. These regulations will not result in owners receiving free tune-ups for the vehicles' useful life. Rather, small portions of such services will be

performed after the first 24 months or 24,000 miles only when necessary to repair an "emission control device or system," and should never obviate the need to have a car serviced at any scheduled interval. Thus, this provision should not cause any market shift.

The Agency believes that requiring the warranty repair to include components other than "emission control devices or systems", if such repair is necessary for a covered emission control device or system to function, should not have significant anticompetitive effects. If such repairs or replacements were not covered by the warranty they might not be performed at all; and where they were performed despite the lack of warranty coverage, they would, in many instances, be performed by the warranty outlet for reasons of convenience. In either situation, the lack of warranty coverage would not have helped the independent repair facility.

In fact, this provision could prove to be "procompetitive." For example, warranty outlets would be less likely to perform an unnecessary full tune-up with a catalytic converter replacement if the full tune-up would be covered under the warranty and not paid for by the consumer. The warranty facility would tend to perform the least repair necessary to restore the vehicle and thus, the consumer would be free to have the full tune-up performed at an appropriate service interval at any repair facility of his or her choice. Without this provision, the warranty outlet could take advantage of the "captured repair" situation feared by the aftermarket part industry by advising the vehicle owner to have an unnecessary tune-up performed at the time of the warranty repair.

The Agency has attempted to minimize the potential anticompetitive effect of the warranty and does not believe that § 85.2107(c)(2) will be anticompetitive. Moreover, the Agency believes that in addition to anticompetitive considerations, it has a responsibility to carry out the purposes of section 207(b), and that for those purposes it is essential to require repair or replacement, under the warranty, of components that cause "emission control devices and systems" to fail. For all the above reasons, the final rule requires the emission performance warranty remedy to include the repair or replacement of all components which (1) have caused a covered emission control device or system to fail, and (2) if not repaired or replaced, will prevent the new or repaired emission control device or system from performing properly.

Section 85.2107(d) of the Reproposal would have required vehicle manufacturers to adjust the maintenance instructions each time a maintenance item is repalced under the emission performance warranty. This paragraph has been deleted in response to the many parties who alleged that this requirement would be time consuming, costly and, in addition, so confusing as to provide consumers little benefit.

Under the final rule, a manufacturer is normally required to perform emission performance warranty repairs within 30 days rather than 21 days, as was proposed. However, in cases where the vehicle owner is required by local, State or Federal law to repair the vehicle in a shorter period, the vehicle manufacturer must perform the repair within the shorter period. The rule as modified, makes clear that failure to meet the time deadline for reasons beyond the manufacturer's control will not subject it to liability.

H. Section 85.2108 Dealer Certification

This section interprets section 207(h) of the Act which requires dealers to provide a certificate with each new light-duty vehicle, stating that the vehicle meets Federal emission standards. Many parties commenting on this section supported it because they believed it would greatly aid in remedying the problem of new vehicles being sold that are not equipped and adjusted to meet emission standards.

Few comments were received regarding the dealer's requirements in providing a certificate. One commenter suggested that it would take a dealer too much time to perform a visual inspection of the vehicle to assure that all emission related components had been properly installed. Therefore, the commenter asserted that this requirement should be modified. The Agency does not agree. Full vehicle inspections, including a check of part numbers for numerous parts on many different vehicle configurations, takes EPA employees between 15 to 20 minutes per vehicle. Since dealers will be required to inspect fewer vehicle configurations, they should be more familiar with the vehicles. Thus, the dealer inspections should take far less time than the EPA inspections. The Agency does not consider this requirement burdensome.

General Motors, in its comment to the standards for light-duty truck regulations, appeared to believe that the dealer certification provision provides vehicle manufacturers the right to require dealers to perform any dealer preparation it chooses. Moreover, General Motors stated that this (i.e., the warranty certificate provision) was inconsistent with attempts by EPA to disallow vehicle manufacturers from performing dealer preparation instructions during assembly-line testing. EPA does not believe that these two provisions are inconsistent, or that the GM statement is correct. The warranty provision merely states that any dealer preparation that is ultimately required by a vehicle manufacturer must be performed in order for the dealer to be able to in good faith provide a warranty certificate which indicates that a vehicle meets emission standards at the time of sale. The issuance of a warranty certificate does not mean that the dealer has performed or is capable of performing all instructions. Therefore, the warranty certificate should not be construed as proof that the dealers actually performed dealer preparation procedures. EPA does not generally discourage manufacturers from performing dealer preparation procedures during its Selective Enforcement Audits (SEA-assembly line tests). If the manufacturer can demonstrate that these procedures are being carried out routinely and correctly at its dealerships, i.e., that test vehicles adequately represent production vehicle at the point they are sold to an ultimate purchaser, EPA may approve the use of these procedures during SEA testing.

General Motors suggested including a mileage limit, as well as a time limit, for the period during which a vehicle is eligible for a free repair under the certificate. EPA has accepted this recommendation, and has included a 4,000 mile limit.

Other manufacturers stated that since their vehicles require maintenance prior to three months subsequent to delivery, that the dealer certificate remedy should be conditioned on performance of that maintenance. The Agency has inserted a provision requiring an owner to comply with the instructions for maintenance and use in order to recover under the dealer certification provision. The demonstration of an owner's compliance with these instructions is to be made in the same manner as is set forth in § 85.2104.

I. Section 85.2109 Inclusion of Warranty Provisions in Owners' Manuals and Warranty Booklets

The basic information required to be provided to a vehicle owner is the same as was contained in the Reproposal. However, because many of the vehicle manufacturers claimed that including all of the information in both the owner's manual and warranty booklet was unnecessarily burdensome, the Agency has changed this requirement. The final

regulation adopts a concept suggested by Ford Motor Company, requiring that the warranty booklet contain all of the relevant information, except for the maintenance instructions which the booklet will usually reference. The owner's manual must only reference the emission warranties and also must contain information on how to obtain a replacement warranty booklet if it is lost or misplaced. However, if a manufacturer does not normally provide a separate warranty booklet with the vehicle, the manufacturer may include the emission performance warranty information in the owner's manual along with the other vehicle warranties.

J. Section 85.2110 Submission of Owners' Manuals and Warranty Statements to EPA

The Reproposal would have required vehicle manufacturers to submit copies of the owners' manuals and warranty booklets in their final printed format 60 days prior to the introduction of the vehicle for sale. Many of the vehicle manufacturers stated that this requirement is impractical because the booklets are not finalized at that time. Many of these parties recommended that vehicle manufacturers be given an option to provide EPA with draft copies 60 days prior to the introduction of vehicles for sale, and final copies within 15 days after the final printing. The Agency has adopted this suggestion.

K. Section 85.2111 Warranty Enforcement

This section remains substantially unchanged from the Reproposal. The rule provides that it is a prohibited act not to comply with the terms and conditions of the emission performance warranty and further sets forth a partial list of acts that would constitute a failure to comply.

Chrysler Corporation alleged in its comments that the Agency had erroneously interpreted the Act in regard to this section. Chrysler alleged that Congress did not mean for particular cases of noncompliance with the warranty to subject vehicle manufacturers to liability for failing to comply with the terms and conditions of the warranty. Rather, Chrysler believes that the Act contemplates that EPA will bring actions only when a vehicle manufacturer shows a pattern of noncompliance. The Agency does not agree. The legislative history of the Amendments clearly indicates that Congress intended for EPA to become involved when an individual warranty claim has not been properly honored. H.R. Rep. No. 95–564, 95th Cong., 1st sess. 169 (1977). Further, since EPA's interpretation is consistent with a literal interpretation of the Act, this section has remained basically intact.

L. Evaluation Plan

EPA intends to review the effectiveness and need for continuation of the provisions contained in this action within five years. In particular, the Agency will solicit comments from the affected parties concerning the effectiveness and economic impact of the emission performance warranty.

M. Reporting and Recordkeeping Requirements

This rulemaking will not impose any significant new or additional reporting or recordkeeping requirements on any party.

Note.—The Agency has determined that this document is not a "significant regulation" requiring the preparation of a Regulatory Analysis under Executive Order 12044. An Economic Analysis has been prepared and is included in the Public Docket.

Dated: May 13, 1980.

Douglas M. Costle,

Administrator.

Accordingly, Part 85 of Title 40 of the Code of Federal Regulations is revised by adding a new Subpart V, as set forth below.

Subpart V—Emissions Control System Performance Warranty Regulations

Sec.

85.2101 General applicability.
85.2102 Definitions.
85.2103 Emission warranty performance.
85.2104 Owners' compliance with instructions for proper maintenance and use.
85.2105 Replacement parts.
85.2106 Warranty claim procedures.
85.2107 Warranty remedy.
85.2108 Dealer certification.
85.2109 Inclusions of warranty provisions in owners' manuals and warranty booklets.
85.2110 Submission of owner manuals and warranty statement to EPA.
85.2111 Warranty enforcement.
85.2112–85.2150 [Reserved]

Authority: Secs. 203, 207, 208, and 301(a) of the Clean Air Act, as amended, (42 U.S.C. 7522, 7541, 7542, and 7601(a))

Subpart V—Emissions Control System Performance Warranty Regulations

§ 85.2101 General applicability.

Sections 85.2101 through 85.2111 are applicable to all 1981 and later model year light-duty vehicles and light-duty trucks.

§ 85.2102 Definitions.

(a) As used in §§ 85.2101 through 85.2111 all terms not defined herein shall have the meaning given them in the Act:

(1) "Act" means Part A of Title II of the Clean Air Act, 42 U.S.C. 7421 *et seq.* (formerly 42 U.S.C. 1857 *et seq.*), as amended.

(2) "Administrator" means the Administrator of the Environmental Protection Agency or an authorized representative of the Administrator.

(3) "Certified Part" means a part certified in accordance with the aftermarket part certification regulations contained in this subpart.

(4) "Emission Performance Warranty" means that warranty given pursuant to this subpart and section 207(b) of the Act.

(5) "EPA–Approved Emission Test" or "Emission Short Test" means any test prescribed under 40 CFR 85.2201 *et seq.*, and meeting all of the requirements thereunder.

(6) "Model Year" means the manufacturer's annual production period (as determined by the Administrator) which includes January 1 of such calendar year; however, if the manufacturer has no annual production period, the term "model year" shall mean the calendar year.

(7) "Original Equipment Part" means a part present in or on a vehicle at the time the vehicle is sold to the ultimate purchaser, except for components installed by a dealer which are not manufactured by the vehicle manufacturer or are not installed at the direction of the vehicle manufacturer.

(8) "Owner" means the original purchaser or any subsequent purchaser of a vehicle.

(9) "Owner's Manual" means the instruction booklet normally provided to the purchaser of a vehicle.

(10) "Useful Life" means that period established pursuant to section 202(d) of the Act and regulations promulgated thereunder.

(11) "Vehicle" means a light duty vehicle or a light duty truck.

(12) "Warranty Booklet" means a booklet, separate from the owner's manual, containing all warranties provided with the vehicle.

(13) "Written Instructions for Proper Maintenance And Use" means those maintenance and operation instructions specified in the owner's manual as being necessary to assure compliance of a vehicle with applicable emission standards for the useful life of the vehicle that are,

(i) In accordance with the instructions specified for performance on the manufacturer's prototype vehicle used in certification (including those specified for vehicles used under special circumstances), and

(ii) In compliance with the requirements of §§ 86.XXX–38 (as

appropriate for the applicable model year vehicle/engine classification), and

(iii) In compliance with any other regulations promulgated by EPA governing maintenance and use instructions.

§ 85.2103 Emission performance warranty.

(a) The manufacturer of each vehicle to which this subpart applies shall warrant in writing that if:

(1) The vehicle is maintained and operated in accordance with the written instructions for proper maintenance and use and

(2) The vehicle fails to conform at any time during its useful life to the applicable emissions standards as judged by an EPA-approved emission test, and

(3) Such nonconformity results or will result in the vehicle owner having to bear any penalty or other sanction (including the denial of the right to use the vehicle) under local, State or Federal law, then the manufacturer shall remedy the nonconformity at no cost to the owner; *except that*, if the vehicle has been in operation for more than 24 months or 24,000 miles, the manufacturer shall be required to remedy only those nonconformities resulting from the failure of components which have been installed in or on the vehicle for the sole or primary purpose of reducing vehicle emissions and that were not in general use prior to model year 1968.

(b) The warranty period shall begin on the date the vehicle is delivered to its utlimate purchaser, or if the vehicle is first placed in service as a "demonstrator" or "company" car prior to delivery, on the date it is first placed in service.

§ 85.2104 Owners' compliance with instructions for proper maintenance and use.

(a) An emission performance warranty claim may be denied on the basis of noncompliance by a vehicle owner with the written instructions for proper maintenance and use.

(b) When determining whether an owner has complied with the written instructions for proper maintenance and use, a vehicle manufacturer may require an owner to submit evidence of compliance only with those written maintenance instructions for which the manufacturer has an objective reason for believing:

(1) Were not performed; and

(2) If not performed could be the cause of the particular vehicle's exceeding applicable emission standards.

(c) Evidence of compliance with a maintenance instruction may consist of:

(1) A maintenance log book which has been validated at the approximate time or mileage intervals specified for service by someone who regularly engages in the business of servicing automobiles for the relevant maintenance instruction(s); or

(2) A showing that the vehicle has been submitted for scheduled maintenance servicing at the approximate time or mileage intervals specified for service to someone who regularly engages in the business of servicing automobiles for the purpose of performing the relevant maintenance; or

(3) A statement by the vehicle owner that he or she performed the maintenance at the approximate time or mileage interval specified including a showing,

(i) That the owner purchased and used proper parts, and

(ii) Upon request by the vehicle manufacturer, that the owner is able to perform the maintenance properly.

(d) Except as provided in paragraph (c)(5) of this section, the time/mileage interval for scheduled maintenance services shall be the service interval specified for that part in the written instructions for proper maintenance and use.

(e) For certified parts having a maintenance or replacement interval different from that specified in the written instructions for proper maintenance and use, the time/mileage interval shall be the service interval for which the part was certified.

(f) The owner may perform maintenance or have maintenance performed more frequently then required in the maintenance instructions.

(g) Except as provided in paragraph (h) of this section, a manufacturer may deny an emission performance warranty claim on the basis of noncompliance with the written instructions for proper maintenance and use only if:

(1) An owner is not able to comply with a request by a manufacturer for evidence pursuant to paragraph (c) of this section; or

(2) Notwithstanding the evidence presented pursuant to paragraph (c) of this section, the manufacturer is able to prove that the vehicle failed an emission short test because

(i) The vehicle was abused, or

(ii) An instruction for the proper maintenance and use was performed in a manner resulting in a component's being improperly installed or a component or related parameter's being adjusted substantially outside of the manufacturer's specifications, or

(iii) Unscheduled maintenance was performed on a vehicle which resulted in the removing or rendering inoperative of any component affecting the vehicle's emissions.

(h) In no case may a manufacturer deny an emission performance warranty claim on the basis of:

(1) Warranty work or predelivery service performed by any facility authorized by the vehicle manufacturer to perform such work or service; or

(2) Work performed in an emergency situation to rectify an unsafe condition, including an unsafe driveability condition, attributable to the manufacturer, provided the vehicle owner has taken steps to put the vehicle back in a conforming condition in a timely manner; or

(3) The use of any uncertified part or non-compliance with any written instruction for proper maintenance and use which is not relevant to the reason that the vehicle failed to comply with applicable emission standards; or

(4) Any cause attributable to the vehicle manufacturer; or

(5) The use of any fuel which is commonly available in the geographical area in which the vehicle or engine is located, unless the written instructions for proper maintenance and use specify that the use of that fuel would adversely affect the emission control devices and systems of the vehicle, and there is commonly available information for the owner to identify the proper fuel to be used.

§ 85.2105 Replacement parts.

(a) No emission performance warranty claim shall be denied on the basis of the use of a properly installed certified part in the maintenance or repair of a vehicle.

(b) Except as provided in § 85.2104(h), a vehicle manufacturer may deny an emission performance warranty claim on the basis of an uncertified replacement part used in the maintenance or repair of a vehicle if the vehicle manufacturer presents evidence that the uncertified replacement part is:

(1) Either defective in materials or workmanship, or not equivalent from an emission standpoint to the original equipment part; and

(2) The owner is unable to rebut the evidence.

(c) A part not required to be replaced at a definite interval in accordance with the written instructions for maintenance and use shall be warranted for the full term of any warranty mandated by the Act. Instructions to replace a component only if checked and found to be operating below specification shall have no bearing on warrranty coverage.

unless an owner did not follow such an instruction prior to the short test failure and noncompliance with that instruction caused the failure of another vehicle component relevant to the nonconformity.

§ 85.2106 Warranty claim procedures.

(a) A claim under the emission performance warranty may be raised immediately upon the failure of an EPA-approved emission test if, as a result of that failure, an owner is required to take action of any kind in order to avoid imposition of a penalty or sanction. An owner need not suffer the loss of the right to use a vehicle, be fined, incur repair expenses, or actually bear any penalty or sanction to satisfy the requirement of § 85.2103(a)(3). That requirement shall be met if a test failure sets a procedure in motion under which the owner will bear a penalty or sanction if a vehicle is not brought into conformity or repaired to some specified extent within some specified period of time.

(b) A warranty claim may be submitted by bringing a vehicle to

(1) Any repair facility authorized by the vehicle manufacturer to service that model vehicle, or

(2) Any repair facility authorized by the vehicle manufacturer to perform emission performance warranty repairs for that model vehicle.

(c) To the extent required by any Federal or State law, whether statutory or common law, a vehicle manufacturer shall be required to provide a means for non-franchised repair facilities to perform emission performance warranty repairs.

(d) The manufacturer of each vehicle to which the warranty is applicable shall establish procedures as to the manner in which a claim under the emission performance warranty is to be processed. The procedures shall:

(1) provide for a final decision by the vehicle manufacturer within a reasonable time, not to exceed 30 days from the time at which the vehicle is initially presented for repair or within the time period during which an owner is required by local, state or federal law to have the vehicle repaired without incurring further penalties or sanctions (whichever is shorter), unless a delay

(i) Is requested by the vehicle owner, or

(ii) Is caused by an event not attributable to the vehicle manufacturer or the warranty repair facility; and

(2) Require that if the facility at which the vehicle is initially presented for repair is unable for any reason to honor the particular claim, then, unless this requirement is waived in writing by the vehicle owner, the repair facility shall forward the claim to an individual or office authorized to make emission performance warranty determinations for the manufacturer.

(e) Within the time period specified in paragraph (d) of this section the manufacturer shall:

(1) Notify the owner that it will honor the claim; or

(2) Provide the owner, in writing, with an explanation of the basis upon which the claim is being denied.

(f) Failure to notify an owner within the required time period (as determined under paragraph (d) of this section) for reasons that are not attributable to the vehicle owner or events which are not beyond the control of the vehicle manufacturer or the repair facility, shall result in the vehicle manufacturer being responsible for repairing the vehicle free to charge to the vehicle owner.

(g) The vehicle manufacturer shall incur all costs associated with a determination that an emission performance warranty claim is valid.

§ 85.2107 Warranty remedy.

(a) The manufacturer's obligation under the emission performance warranty shall be to make all adjustments, repairs or replacements necessary to assure that the vehicle complies with applicable emission standards of the U.S. Environmental Protection Agency, that it will continue to comply for the remainder of its useful life (if proper maintenance and operation are continued), and that it will operate in a safe manner. The manufacturer shall bear all costs incurred as a result of the above obligation, *except that* after the first 24 months or 24,000 miles (whichever first occurs) the manufacturer shall be responsible only for:

(1) The adjustment, repair or replacement of those components which have been installed in or on a vehicle for the sole or primary purpose of reducing vehicle emissions, and which were not in general use prior to model year 1968; and

(2) All other components which must be adjusted, repaired or replaced to enable a component repaired or replaced under paragraph (a)(1) of this section to perform properly.

(b) Under the Emissions Performance Warranty, the manufacturer shall be liable for the total cost of the remedy for any vehicle validly presented for repair to any authorized service facility authorized by the vehicle manufacturer. State or local limitations as to the extent of the penalty or sanction imposed upon an owner of a failed vehicle shall have no bearing on this liability.

(c) The remedy provided under paragraph (a) of this section shall include the repair or replacement of certified parts.

(d) If a manufacturer is unable (for reasons not attributable to the vehicle owner or events beyond the control of the vehicle manufacturer or an authorized repair facility) to repair a vehicle within the time period specified under § 85.2106(d) after the initial presentation of the vehicle to an authorized repair facility, then the owner shall be entitled to have the warranty remedy performed, at the expense of the manufacturer, by any repair facility of the owner's choosing.

§ 85.2108 Dealer certification.

(a) Upon the sale of each new light-duty motor vehicle, the dealer shall furnish to the purchaser a certificate that the motor vehicle conforms to all applicable emission standards of the U.S. Environmental Protection Agency.

(b) The certificate shall state that it is being made upon the basis of:

(1) The dealer's knowledge that the vehicle is covered by an EPA Certificate of Conformity;

(2) A visual inspection of the vehicle, including the engine, to assure that all emission related components have been properly installed; and

(3) The dealer's performance of all emission related preparation required by the manufacturer prior to the sale of the vehicle.

(c) The certificate shall further state that if the vehicle fails an EPA-approved emission test prior to the expiration of three months or 4,000 miles (whichever occurs first) from the date or mileage at the time of delivery of the vehicle to the ultimate purchaser, and the vehicle has been maintained and used in accordance with the written instructions for proper maintenance and use, then the vehicle manufacturer shall remedy the nonconformity under the emission performance warranty.

(d) A vehicle manufacturer shall provide the § 85.2107 remedy, free of charge to the vehicle owner, for any vehicle which, although maintained in accordance with the written instructions for proper maintenance and use, fails an emission short test prior to the expiration of three months or 4,000 miles from the time of sale to the ultimate purchaser, without regard to whether a penalty or sanction is imposed because of the emission short test failure.

§ 85.2109 Inclusion of warranty provisions in owner's manuals and warranty booklets.

(a) A manufacturer shall furnish with each new motor vehicle, a full explanation of the Emission

Performance Warranty, including at a minimum the following information:

(1) A basic statement of the coverage of the emissions performance warranty as set out in § 85.2103. This shall be separated from any other warranty given by the manufacturer and shall be prefaced by the title "Emissions Performance Warranty" set in bold face type; and

(2) A list of all items which are covered by the emission performance warranty for the full useful life of the vehicle. This list shall contain all components which have been installed in or on a vehicle solely or primarily for the purpose of reducing vehicle emissions, except those components which were in general use prior to model year 1968. All items listed pursuant to this subsection shall be described in the same manner as they are likely to be described on a service facility work receipt for that vehicle; and

(3) A list or a reference to the location of the instructions for proper maintenance and use, together with the time and/or mileage interval at which such instructions are to be performed; and

(4) An explanation of the effect that the use of certified parts will have on the emission performance warranty. This explanation shall comport with the provisions of §§ 85.2105(b) and (c), including a statement in boldface type that maintenance, replacement, or repair of the emission control devices and systems may be performed by any automotive repair establishment or individual using any certified part; and

(5) Complete instructions as to when and how an owner may bring a claim under the emissions performance warranty, as governed by §§ 85.2104 and 85.2106. These instructions shall include:

(i) An explanation of the point in time at which a claim may be raised; and

(ii) Complete procedures as to the manner in which a claim may be raised; and

(iii) The provisions for manufacturer liability contained in § 85.2106(f) if the manufacturer fails to respond within the time period set in accordance with § 85.2106(d);

(6) An explanation that an owner may obtain further information concerning the emission performance warranty or that an owner may report violations of the terms of the Emission Performance Warranty by contacting the Director, Field Operation and Support Division (EN-397), Environmental Protection Agency, 401 "M" Street, SW., Washington, D.C. 20460.

(b) The warranty information shall be provided in the same document as other warranties provided with the vehicle.

(c) If a separate warranty booklet is provided with the vehicle, the owner's manual shall contain, at a minimum, the following information:

(1) A general list of all warranties covering the vehicle; and

(2) A statement that detailed warranty information can be found in the warranty booklet.

(d) If a separate warranty booklet is not provided with the vehicle, the information specified in paragraph (a) of this section shall be contained in the owner's manual.

§ 85.2110 Submission of owners' manuals and warranty statements to EPA.

(a) The manufacturer of each vehicle to which this subpart applies shall submit a copy to EPA of both the owner's manual and warranty booklet (if applicable) for each model vehicle, *except that,* if the same warranty information is to be provided for more than one model vehicle, the manufacturer may submit copies for a single model vehicle with a statement that such copies are complete and accurate representation of the warranty information provided with all other specified models.

(1) The owner's manuals and warranty booklets should be received by EPA 60 days prior to the introduction of the vehicle for sale.

(2) If the manuals and warranty booklets are not in their final printed format 60 days prior to the introduction of the vehicle for sale, a manufacturer may submit the most recent draft at that time, provided that final versions are submitted within 15 days of the final printing.

(b) All materials described in paragraph (a) of this section shall be sent to: Director, Field Operation and Support Division (EN-397), Office of Enforcement, Environmental Protection Agency, 401 "M" Street SW., Washington, D.C. 20460.

§ 85.2111 Warranty enforcement.

The following acts are prohibited and may subject a manufacturer to up to a $10,000 civil penalty for each offense:

(a) Selling or leasing a light duty vehicle without providing in writing the warranty information required by § 85.2109;

(b) Failing or refusing to comply with the terms and conditions of the Emission Performance Warranty with respect to any vehicle to which this subpart applies. Acts constituting such a failure or refusal shall include, but are not limited to, the following,

(1) Failure to honor a valid warranty claim,

(2) Performance of a warranty repair in a manner which cannot reasonably be expected to allow the vehicle to meet applicable emission standards for the remainder of its useful life,

(3) Failure of a manufacturer to reimburse a dealer or other designated agent for performance of a vehicle repair made pursuant to this subpart, and

(4) Failure of a manufacturer to supply a part necessary to perform a warranty repair within the time limit specified under § 85.2106(d), unless such failure is for a reason not attributable to the vehicle manufacturer or the warranty repair facility;

(c) To provide directly or indirectly in any communication to the ultimate purchaser or any subsequent purchaser that the emission performance warranty coverage is conditioned upon the use of any name brand part, component, or system or upon service (other than a component or service provided without charge under the terms of the purchase agreement), unless the communication is made pursuant to a written waiver by the Administrator.

§§ 85.2112 through 85.2150 [Reserved]

(Sec. 203, 207, 208 and 301(a) of the Clean Air Act, as amended, (42 U.S.C. 7522, 7541, 7542 and 7601(a)))

Appendix

Note.—This Appendix will not appear in the Code of Federal Regulations.

5 Year/50,000 Mile Performance Warranty Parts List

I. Air/Fuel Metering System
- Feedback Control System and Sensors.
- Electric Choke.
- Altitude Compensation System.
- Deceleration Controls.
- Early Fuel Evaporative Controls.

II. Ignition Spark Advance/Retard System
- Dual Diaphragm Vacuum Advance Unit.
- Electronic Spark Controls.
- Valves and Switches Sensing Vacuum, Temperature, Time, Transmission Gear, etc. used to control advance/retard.

III. Evaporative Emission Control System
- Vapor Storage Canister and Filter.
- Vapor Liquid Separator.

IV. Positive Crankcase Ventilation (PCV) System
- PCV Valve.

V. Exhaust Gas Recirculation (EGR) System
- EGR Valve.
- EGR Backpressure Transducer.
- EGR Spacer Plate.
- Sensors and Switches used to control EGR flow.

VI. Air Injection System
- Air Pump.
- Air Distribution System.
- Diverter, Bypass or Gulp Valve.
- Anti-Backfire or Deceleration Valve.
- Reed Valve.

- Sensors or Valves used to control Air Injection.

VII. Catalytic and Thermal Reactor System
- Catalytic Converter.
- Catalyst Material and Internal Structure.
- Thermal Reactor.
- Oxygen and Exhaust Gas Sensors.
- Fuel Filler Neck Restrictor.

VIII. Electronic Engine Controls
- Engine Parameter Sensors and Controls.
- Electronic Control Unit.

IX. Hoses, Clamps, Brackets, Pipes, Gaskets, Belts, Seals, Connectors, etc. Used in the Above Systems

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